

Fifth Creek Energy Company, LLC

Well Name: **Randall Creek 503-2920H**

Surface Location: Randall Creek 29 SESE Pad Sec.29-T12N-R62W

North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

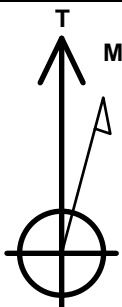
Ground Elevation: 5346.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1599810.22	3320961.20	40.974064	-104.337703	

Original Well Elev WELL @ 5369.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 250'FSL & 800'FEL, Sec.29	1.0	0.0	0.0	Point
BHL 602'FNL & 700'FEL, Sec.20	7712.0	9754.5	425.6	Point
LP 300'FSL & 700'FEL, Sec.29	7712.0	50.7	102.2	Point



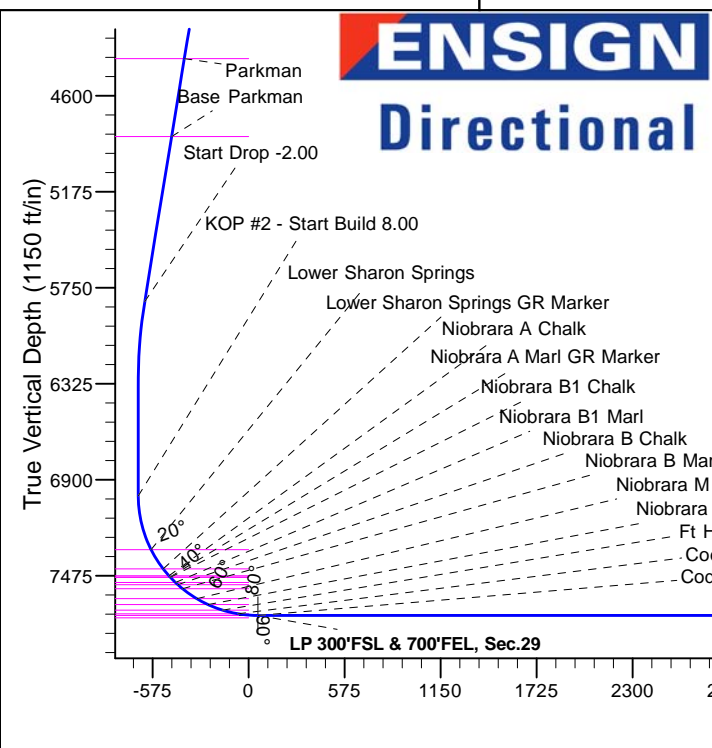
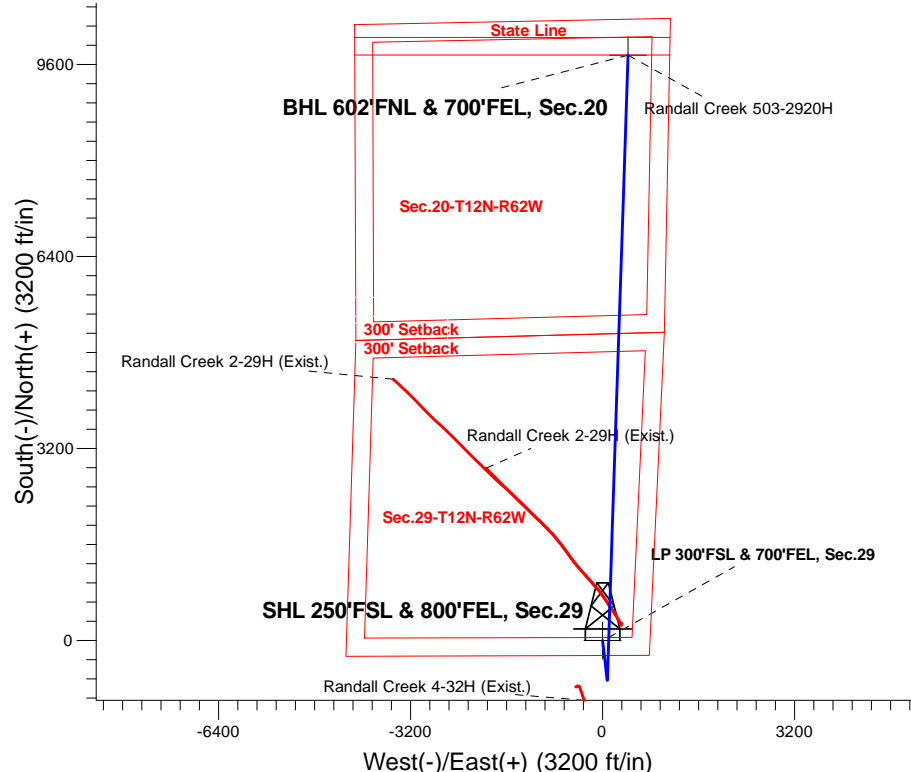
Azimuths to True North
Magnetic North: 7.90°

Magnetic Field
Strength: 52861.4snT
Dip Angle: 67.37°
Date: 3/13/2017
Model: IGRF2010

Randall Creek 29 SESE Pad Sec.29-T12N-R62W
Randall Creek 503-2920H
Plan #1 (3-13-17)
17:13, March 14 2017

ANNOTATIONS

TVD	MD	Annotation
1700.0	1700.0	KOP - Start Build 1.50
5832.9	5883.3	Start Drop -2.00
6995.9	7048.4	KOP #2 - Start Build 8.00
7712.0	17882.4	TD at 17882.4



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
3	2325.7	9.38	173.28	2322.9	-50.8	6.0	1.50	173.28	-50.5	
4	5883.3	9.38	173.28	5832.9	-626.9	73.8	0.00	0.00	-623.1	
5	6352.5	0.00	0.00	6300.0	-665.0	78.3	2.00	180.00	-661.0	
6	7048.4	0.00	0.00	6995.9	-665.0	78.3	0.00	0.00	-661.0	
7	8173.3	90.00	1.91	7712.0	50.7	102.2	8.00	1.91	55.1	
8	8173.3	90.00	1.91	7712.0	50.7	102.2	0.00	0.00	55.1	LP 300'FSL & 700'FEL, Sec.29
9	17882.4	90.00	1.91	7712.0	9754.5	425.6	0.00	-90.00	9763.7	BHL 602'FNL & 700'FEL, Sec.20

BHL 602'FNL & 700'FEL, Sec.20

TD at 17882.4

Vertical Section at 2.50° (1150 ft/in)



Fifth Creek Energy Company, LLC

Sec.29-T12N-R62W

Randall Creek 29 SESE Pad Sec.29-T12N-R62W

Randall Creek 503-2920H

Wellbore #1

Plan: Plan #1 (3-13-17)

Standard Planning Report

14 March, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Project	Sec.29-T12N-R62W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Randall Creek 29 SESE Pad Sec.29-T12N-R62W				
Site Position:		Northing:	1,599,808.96 usft	Latitude:	40.974064
From:	Lat/Long	Easting:	3,320,860.69 usft	Longitude:	-104.338067
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.75

Well	Randall Creek 503-2920H					
Well Position	+N/-S	-0.1 ft	Northing:	1,599,810.22 usft	Latitude:	40.974064
	+E/-W	100.5 ft	Easting:	3,320,961.20 usft	Longitude:	-104.337703
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,346.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/13/2017	7.90	67.37	52,861

Design	Plan #1 (3-13-17)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	2.50

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,325.7	9.38	173.28	2,322.9	-50.8	6.0	1.50	1.50	0.00	173.28	
5,883.3	9.38	173.28	5,832.9	-626.9	73.8	0.00	0.00	0.00	0.00	
6,352.5	0.00	0.00	6,300.0	-665.0	78.3	2.00	-2.00	0.00	180.00	
7,048.4	0.00	0.00	6,995.9	-665.0	78.3	0.00	0.00	0.00	0.00	
8,173.3	90.00	1.91	7,712.0	50.7	102.2	8.00	8.00	0.00	1.91	
8,173.3	90.00	1.91	7,712.0	50.7	102.2	0.00	0.00	0.00	0.00	LP 300'FSL & 700'FEI
17,882.4	90.00	1.91	7,712.0	9,754.5	425.6	0.00	0.00	0.00	-90.00	BHL 602'FNL & 700'F

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Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 250'FSL & 800'FEL, Sec.29									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,618.0	0.00	0.00	1,618.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre C&D Sand									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,800.0	1.50	173.28	1,800.0	-1.3	0.2	-1.3	1.50	1.50	0.00
1,900.0	3.00	173.28	1,899.9	-5.2	0.6	-5.2	1.50	1.50	0.00
2,000.0	4.50	173.28	1,999.7	-11.7	1.4	-11.6	1.50	1.50	0.00
2,100.0	6.00	173.28	2,099.3	-20.8	2.4	-20.7	1.50	1.50	0.00
2,200.0	7.50	173.28	2,198.6	-32.5	3.8	-32.3	1.50	1.50	0.00
2,300.0	9.00	173.28	2,297.5	-46.7	5.5	-46.4	1.50	1.50	0.00
2,325.7	9.38	173.28	2,322.9	-50.8	6.0	-50.5	1.50	1.50	0.00
2,398.8	9.38	173.28	2,395.0	-62.6	7.4	-62.2	0.00	0.00	0.00
Base Pierre C&D Sand									
2,400.0	9.38	173.28	2,396.2	-62.8	7.4	-62.4	0.00	0.00	0.00
2,500.0	9.38	173.28	2,494.9	-79.0	9.3	-78.5	0.00	0.00	0.00
2,600.0	9.38	173.28	2,593.5	-95.2	11.2	-94.6	0.00	0.00	0.00
2,700.0	9.38	173.28	2,692.2	-111.4	13.1	-110.7	0.00	0.00	0.00
2,800.0	9.38	173.28	2,790.9	-127.6	15.0	-126.8	0.00	0.00	0.00
2,825.5	9.38	173.28	2,816.0	-131.7	15.5	-130.9	0.00	0.00	0.00
Pierre B Sand									
2,896.4	9.38	173.28	2,886.0	-143.2	16.9	-142.3	0.00	0.00	0.00
Base Pierre B Sand									
2,900.0	9.38	173.28	2,889.5	-143.8	16.9	-142.9	0.00	0.00	0.00
3,000.0	9.38	173.28	2,988.2	-160.0	18.8	-159.0	0.00	0.00	0.00
3,100.0	9.38	173.28	3,086.8	-176.2	20.7	-175.1	0.00	0.00	0.00
3,200.0	9.38	173.28	3,185.5	-192.4	22.7	-191.2	0.00	0.00	0.00
3,300.0	9.38	173.28	3,284.2	-208.6	24.6	-207.3	0.00	0.00	0.00
3,400.0	9.38	173.28	3,382.8	-224.8	26.5	-223.4	0.00	0.00	0.00
3,500.0	9.38	173.28	3,481.5	-241.0	28.4	-239.5	0.00	0.00	0.00
3,600.0	9.38	173.28	3,580.1	-257.2	30.3	-255.6	0.00	0.00	0.00
3,644.4	9.38	173.28	3,624.0	-264.3	31.1	-262.7	0.00	0.00	0.00
Pierre A Sand									
3,700.0	9.38	173.28	3,678.8	-273.3	32.2	-271.7	0.00	0.00	0.00

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Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.0	9.38	173.28	3,777.5	-289.5	34.1	-287.8	0.00	0.00	0.00
3,900.0	9.38	173.28	3,876.1	-305.7	36.0	-303.9	0.00	0.00	0.00
4,000.0	9.38	173.28	3,974.8	-321.9	37.9	-320.0	0.00	0.00	0.00
4,097.5	9.38	173.28	4,071.0	-337.7	39.8	-335.7	0.00	0.00	0.00
Base Pierre A Sand									
4,100.0	9.38	173.28	4,073.5	-338.1	39.8	-336.1	0.00	0.00	0.00
4,200.0	9.38	173.28	4,172.1	-354.3	41.7	-352.2	0.00	0.00	0.00
4,300.0	9.38	173.28	4,270.8	-370.5	43.6	-368.3	0.00	0.00	0.00
4,400.0	9.38	173.28	4,369.4	-386.7	45.5	-384.4	0.00	0.00	0.00
4,406.6	9.38	173.28	4,376.0	-387.8	45.7	-385.4	0.00	0.00	0.00
Parkman									
4,500.0	9.38	173.28	4,468.1	-402.9	47.4	-400.5	0.00	0.00	0.00
4,600.0	9.38	173.28	4,566.8	-419.1	49.3	-416.5	0.00	0.00	0.00
4,700.0	9.38	173.28	4,665.4	-435.3	51.3	-432.6	0.00	0.00	0.00
4,800.0	9.38	173.28	4,764.1	-451.5	53.2	-448.7	0.00	0.00	0.00
4,880.0	9.38	173.28	4,843.0	-464.4	54.7	-461.6	0.00	0.00	0.00
Base Parkman									
4,900.0	9.38	173.28	4,862.7	-467.7	55.1	-464.8	0.00	0.00	0.00
5,000.0	9.38	173.28	4,961.4	-483.9	57.0	-480.9	0.00	0.00	0.00
5,100.0	9.38	173.28	5,060.1	-500.1	58.9	-497.0	0.00	0.00	0.00
5,200.0	9.38	173.28	5,158.7	-516.3	60.8	-513.1	0.00	0.00	0.00
5,300.0	9.38	173.28	5,257.4	-532.5	62.7	-529.2	0.00	0.00	0.00
5,400.0	9.38	173.28	5,356.1	-548.7	64.6	-545.3	0.00	0.00	0.00
5,500.0	9.38	173.28	5,454.7	-564.9	66.5	-561.4	0.00	0.00	0.00
5,600.0	9.38	173.28	5,553.4	-581.0	68.4	-577.5	0.00	0.00	0.00
5,700.0	9.38	173.28	5,652.0	-597.2	70.3	-593.6	0.00	0.00	0.00
5,800.0	9.38	173.28	5,750.7	-613.4	72.2	-609.7	0.00	0.00	0.00
5,883.3	9.38	173.28	5,832.9	-626.9	73.8	-623.1	0.00	0.00	0.00
Start Drop -2.00									
5,900.0	9.05	173.28	5,849.4	-629.6	74.1	-625.8	2.00	-2.00	0.00
6,000.0	7.05	173.28	5,948.4	-643.5	75.8	-639.6	2.00	-2.00	0.00
6,100.0	5.05	173.28	6,047.8	-654.0	77.0	-650.0	2.00	-2.00	0.00
6,200.0	3.05	173.28	6,147.6	-661.0	77.8	-656.9	2.00	-2.00	0.00
6,300.0	1.05	173.28	6,247.5	-664.5	78.2	-660.5	2.00	-2.00	0.00
6,352.5	0.00	0.00	6,300.0	-665.0	78.3	-661.0	2.00	-2.00	0.00
6,400.0	0.00	0.00	6,347.5	-665.0	78.3	-661.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,447.5	-665.0	78.3	-661.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,547.5	-665.0	78.3	-661.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,647.5	-665.0	78.3	-661.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,747.5	-665.0	78.3	-661.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,847.5	-665.0	78.3	-661.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,947.5	-665.0	78.3	-661.0	0.00	0.00	0.00
7,048.4	0.00	0.00	6,995.9	-665.0	78.3	-661.0	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
7,100.0	4.13	1.91	7,047.4	-663.1	78.4	-659.1	8.00	8.00	0.00
7,200.0	12.13	1.91	7,146.4	-649.0	78.8	-645.0	8.00	8.00	0.00
7,300.0	20.13	1.91	7,242.3	-621.3	79.8	-617.2	8.00	8.00	0.00
7,382.5	26.73	1.91	7,318.0	-588.5	80.9	-584.4	8.00	8.00	0.00
Lower Sharon Springs									
7,400.0	28.13	1.91	7,333.5	-580.5	81.1	-576.4	8.00	8.00	0.00
7,500.0	36.13	1.91	7,418.1	-527.3	82.9	-523.2	8.00	8.00	0.00
7,518.6	37.62	1.91	7,433.0	-516.2	83.3	-512.1	8.00	8.00	0.00

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Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Lower Sharon Springs GR Marker									
7,573.2	41.99	1.91	7,475.0	-481.2	84.4	-477.1	8.00	8.00	0.00
Niobrara A Chalk									
7,582.7	42.75	1.91	7,482.0	-474.8	84.6	-470.7	8.00	8.00	0.00
Niobrara A Marl GR Marker									
7,585.5	42.97	1.91	7,484.0	-473.0	84.7	-468.8	8.00	8.00	0.00
Niobrara B1 Chalk									
7,600.0	44.13	1.91	7,494.5	-463.0	85.0	-458.8	8.00	8.00	0.00
7,629.1	46.46	1.91	7,515.0	-442.3	85.7	-438.2	8.00	8.00	0.00
Niobrara B1 Marl									
7,648.2	47.99	1.91	7,528.0	-428.3	86.2	-424.1	8.00	8.00	0.00
Niobrara B Chalk									
7,685.2	50.95	1.91	7,552.0	-400.2	87.1	-396.0	8.00	8.00	0.00
Niobrara B Marl									
7,700.0	52.13	1.91	7,561.2	-388.6	87.5	-384.4	8.00	8.00	0.00
7,790.3	59.36	1.91	7,612.0	-314.1	90.0	-309.9	8.00	8.00	0.00
Niobrara M Zone									
7,800.0	60.14	1.91	7,616.9	-305.7	90.3	-301.5	8.00	8.00	0.00
7,865.8	65.40	1.91	7,647.0	-247.2	92.2	-243.0	8.00	8.00	0.00
Niobrara M Zone Base									
7,900.0	68.14	1.91	7,660.5	-215.8	93.3	-211.5	8.00	8.00	0.00
7,958.4	72.81	1.91	7,680.0	-160.9	95.1	-156.6	8.00	8.00	0.00
Ft Hays									
8,000.0	76.14	1.91	7,691.1	-120.8	96.5	-116.5	8.00	8.00	0.00
8,053.4	80.41	1.91	7,702.0	-68.5	98.2	-64.1	8.00	8.00	0.00
Codell									
8,100.0	84.14	1.91	7,708.3	-22.4	99.7	-18.0	8.00	8.00	0.00
8,173.3	90.00	1.91	7,712.0	50.7	102.2	55.1	8.00	8.00	0.00
Codell target - LP 300'FSL & 700'FEL, Sec.29									
8,200.0	90.00	1.91	7,712.0	77.4	103.1	81.9	0.00	0.00	0.00
8,300.0	90.00	1.91	7,712.0	177.4	106.4	181.8	0.00	0.00	0.00
8,400.0	90.00	1.91	7,712.0	277.3	109.7	281.8	0.00	0.00	0.00
8,500.0	90.00	1.91	7,712.0	377.3	113.1	381.8	0.00	0.00	0.00
8,600.0	90.00	1.91	7,712.0	477.2	116.4	481.8	0.00	0.00	0.00
8,700.0	90.00	1.91	7,712.0	577.2	119.7	581.8	0.00	0.00	0.00
8,800.0	90.00	1.91	7,712.0	677.1	123.1	681.8	0.00	0.00	0.00
8,900.0	90.00	1.91	7,712.0	777.0	126.4	781.8	0.00	0.00	0.00
9,000.0	90.00	1.91	7,712.0	877.0	129.7	881.8	0.00	0.00	0.00
9,100.0	90.00	1.91	7,712.0	976.9	133.1	981.8	0.00	0.00	0.00
9,200.0	90.00	1.91	7,712.0	1,076.9	136.4	1,081.8	0.00	0.00	0.00
9,300.0	90.00	1.91	7,712.0	1,176.8	139.7	1,181.8	0.00	0.00	0.00
9,400.0	90.00	1.91	7,712.0	1,276.8	143.1	1,281.8	0.00	0.00	0.00
9,500.0	90.00	1.91	7,712.0	1,376.7	146.4	1,381.8	0.00	0.00	0.00
9,600.0	90.00	1.91	7,712.0	1,476.7	149.7	1,481.8	0.00	0.00	0.00
9,700.0	90.00	1.91	7,712.0	1,576.6	153.1	1,581.8	0.00	0.00	0.00
9,800.0	90.00	1.91	7,712.0	1,676.5	156.4	1,681.8	0.00	0.00	0.00
9,900.0	90.00	1.91	7,712.0	1,776.5	159.7	1,781.8	0.00	0.00	0.00
10,000.0	90.00	1.91	7,712.0	1,876.4	163.1	1,881.8	0.00	0.00	0.00
10,100.0	90.00	1.91	7,712.0	1,976.4	166.4	1,981.8	0.00	0.00	0.00
10,200.0	90.00	1.91	7,712.0	2,076.3	169.7	2,081.7	0.00	0.00	0.00
10,300.0	90.00	1.91	7,712.0	2,176.3	173.1	2,181.7	0.00	0.00	0.00
10,400.0	90.00	1.91	7,712.0	2,276.2	176.4	2,281.7	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,500.0	90.00	1.91	7,712.0	2,376.2	179.7	2,381.7	0.00	0.00	0.00	
10,600.0	90.00	1.91	7,712.0	2,476.1	183.1	2,481.7	0.00	0.00	0.00	
10,700.0	90.00	1.91	7,712.0	2,576.0	186.4	2,581.7	0.00	0.00	0.00	
10,800.0	90.00	1.91	7,712.0	2,676.0	189.7	2,681.7	0.00	0.00	0.00	
10,900.0	90.00	1.91	7,712.0	2,775.9	193.1	2,781.7	0.00	0.00	0.00	
11,000.0	90.00	1.91	7,712.0	2,875.9	196.4	2,881.7	0.00	0.00	0.00	
11,100.0	90.00	1.91	7,712.0	2,975.8	199.7	2,981.7	0.00	0.00	0.00	
11,200.0	90.00	1.91	7,712.0	3,075.8	203.1	3,081.7	0.00	0.00	0.00	
11,300.0	90.00	1.91	7,712.0	3,175.7	206.4	3,181.7	0.00	0.00	0.00	
11,400.0	90.00	1.91	7,712.0	3,275.7	209.7	3,281.7	0.00	0.00	0.00	
11,500.0	90.00	1.91	7,712.0	3,375.6	213.1	3,381.7	0.00	0.00	0.00	
11,600.0	90.00	1.91	7,712.0	3,475.5	216.4	3,481.7	0.00	0.00	0.00	
11,700.0	90.00	1.91	7,712.0	3,575.5	219.7	3,581.7	0.00	0.00	0.00	
11,800.0	90.00	1.91	7,712.0	3,675.4	223.0	3,681.7	0.00	0.00	0.00	
11,900.0	90.00	1.91	7,712.0	3,775.4	226.4	3,781.7	0.00	0.00	0.00	
12,000.0	90.00	1.91	7,712.0	3,875.3	229.7	3,881.7	0.00	0.00	0.00	
12,100.0	90.00	1.91	7,712.0	3,975.3	233.0	3,981.6	0.00	0.00	0.00	
12,200.0	90.00	1.91	7,712.0	4,075.2	236.4	4,081.6	0.00	0.00	0.00	
12,300.0	90.00	1.91	7,712.0	4,175.2	239.7	4,181.6	0.00	0.00	0.00	
12,400.0	90.00	1.91	7,712.0	4,275.1	243.0	4,281.6	0.00	0.00	0.00	
12,500.0	90.00	1.91	7,712.0	4,375.0	246.4	4,381.6	0.00	0.00	0.00	
12,600.0	90.00	1.91	7,712.0	4,475.0	249.7	4,481.6	0.00	0.00	0.00	
12,700.0	90.00	1.91	7,712.0	4,574.9	253.0	4,581.6	0.00	0.00	0.00	
12,800.0	90.00	1.91	7,712.0	4,674.9	256.4	4,681.6	0.00	0.00	0.00	
12,900.0	90.00	1.91	7,712.0	4,774.8	259.7	4,781.6	0.00	0.00	0.00	
13,000.0	90.00	1.91	7,712.0	4,874.8	263.0	4,881.6	0.00	0.00	0.00	
13,100.0	90.00	1.91	7,712.0	4,974.7	266.4	4,981.6	0.00	0.00	0.00	
13,200.0	90.00	1.91	7,712.0	5,074.7	269.7	5,081.6	0.00	0.00	0.00	
13,300.0	90.00	1.91	7,712.0	5,174.6	273.0	5,181.6	0.00	0.00	0.00	
13,400.0	90.00	1.91	7,712.0	5,274.5	276.4	5,281.6	0.00	0.00	0.00	
13,500.0	90.00	1.91	7,712.0	5,374.5	279.7	5,381.6	0.00	0.00	0.00	
13,600.0	90.00	1.91	7,712.0	5,474.4	283.0	5,481.6	0.00	0.00	0.00	
13,700.0	90.00	1.91	7,712.0	5,574.4	286.4	5,581.6	0.00	0.00	0.00	
13,800.0	90.00	1.91	7,712.0	5,674.3	289.7	5,681.6	0.00	0.00	0.00	
13,900.0	90.00	1.91	7,712.0	5,774.3	293.0	5,781.6	0.00	0.00	0.00	
14,000.0	90.00	1.91	7,712.0	5,874.2	296.3	5,881.5	0.00	0.00	0.00	
14,100.0	90.00	1.91	7,712.0	5,974.2	299.7	5,981.5	0.00	0.00	0.00	
14,200.0	90.00	1.91	7,712.0	6,074.1	303.0	6,081.5	0.00	0.00	0.00	
14,300.0	90.00	1.91	7,712.0	6,174.0	306.3	6,181.5	0.00	0.00	0.00	
14,400.0	90.00	1.91	7,712.0	6,274.0	309.7	6,281.5	0.00	0.00	0.00	
14,500.0	90.00	1.91	7,712.0	6,373.9	313.0	6,381.5	0.00	0.00	0.00	
14,600.0	90.00	1.91	7,712.0	6,473.9	316.3	6,481.5	0.00	0.00	0.00	
14,700.0	90.00	1.91	7,712.0	6,573.8	319.7	6,581.5	0.00	0.00	0.00	
14,800.0	90.00	1.91	7,712.0	6,673.8	323.0	6,681.5	0.00	0.00	0.00	
14,900.0	90.00	1.91	7,712.0	6,773.7	326.3	6,781.5	0.00	0.00	0.00	
15,000.0	90.00	1.91	7,712.0	6,873.7	329.7	6,881.5	0.00	0.00	0.00	
15,100.0	90.00	1.91	7,712.0	6,973.6	333.0	6,981.5	0.00	0.00	0.00	
15,200.0	90.00	1.91	7,712.0	7,073.5	336.3	7,081.5	0.00	0.00	0.00	
15,300.0	90.00	1.91	7,712.0	7,173.5	339.6	7,181.5	0.00	0.00	0.00	
15,400.0	90.00	1.91	7,712.0	7,273.4	343.0	7,281.5	0.00	0.00	0.00	
15,500.0	90.00	1.91	7,712.0	7,373.4	346.3	7,381.5	0.00	0.00	0.00	
15,600.0	90.00	1.91	7,712.0	7,473.3	349.6	7,481.5	0.00	0.00	0.00	
15,700.0	90.00	1.91	7,712.0	7,573.3	353.0	7,581.5	0.00	0.00	0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Company:	Fifth Creek Energy Company, LLC	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad	North Reference:	True
	Sec.29-T12N-R62W		
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,800.0	90.00	1.91	7,712.0	7,673.2	356.3	7,681.5	0.00	0.00	0.00	
15,900.0	90.00	1.91	7,712.0	7,773.2	359.6	7,781.4	0.00	0.00	0.00	
16,000.0	90.00	1.91	7,712.0	7,873.1	363.0	7,881.4	0.00	0.00	0.00	
16,100.0	90.00	1.91	7,712.0	7,973.0	366.3	7,981.4	0.00	0.00	0.00	
16,200.0	90.00	1.91	7,712.0	8,073.0	369.6	8,081.4	0.00	0.00	0.00	
16,300.0	90.00	1.91	7,712.0	8,172.9	373.0	8,181.4	0.00	0.00	0.00	
16,400.0	90.00	1.91	7,712.0	8,272.9	376.3	8,281.4	0.00	0.00	0.00	
16,500.0	90.00	1.91	7,712.0	8,372.8	379.6	8,381.4	0.00	0.00	0.00	
16,600.0	90.00	1.91	7,712.0	8,472.8	382.9	8,481.4	0.00	0.00	0.00	
16,700.0	90.00	1.91	7,712.0	8,572.7	386.3	8,581.4	0.00	0.00	0.00	
16,800.0	90.00	1.91	7,712.0	8,672.7	389.6	8,681.4	0.00	0.00	0.00	
16,900.0	90.00	1.91	7,712.0	8,772.6	392.9	8,781.4	0.00	0.00	0.00	
17,000.0	90.00	1.91	7,712.0	8,872.5	396.3	8,881.4	0.00	0.00	0.00	
17,100.0	90.00	1.91	7,712.0	8,972.5	399.6	8,981.4	0.00	0.00	0.00	
17,200.0	90.00	1.91	7,712.0	9,072.4	402.9	9,081.4	0.00	0.00	0.00	
17,300.0	90.00	1.91	7,712.0	9,172.4	406.3	9,181.4	0.00	0.00	0.00	
17,400.0	90.00	1.91	7,712.0	9,272.3	409.6	9,281.4	0.00	0.00	0.00	
17,500.0	90.00	1.91	7,712.0	9,372.3	412.9	9,381.4	0.00	0.00	0.00	
17,600.0	90.00	1.91	7,712.0	9,472.2	416.2	9,481.4	0.00	0.00	0.00	
17,700.0	90.00	1.91	7,712.0	9,572.2	419.6	9,581.3	0.00	0.00	0.00	
17,800.0	90.00	1.91	7,712.0	9,672.1	422.9	9,681.3	0.00	0.00	0.00	
17,882.4	90.00	1.91	7,712.0	9,754.5	425.6	9,763.7	0.00	0.00	0.00	
TD at 17882.4 - BHL 602°FNL & 700°FEL, Sec.20										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 250°FSL & 800°FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,599,810.21	3,320,961.20	40.974064	-104.337703	
BHL 602°FNL & 700°FEL - plan hits target center - Point	0.00	0.00	7,712.0	9,754.5	425.6	1,609,569.75	3,321,258.96	41.000836	-104.336161	
LP 300°FSL & 700°FEL, ! - plan hits target center - Point	0.00	0.00	7,712.0	50.7	102.2	1,599,862.26	3,321,062.70	40.974203	-104.337333	

Database:	US_EDM	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
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Project:	Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	North Reference:	True
Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-13-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,618.0	1,618.0	Pierre C&D Sand				
2,398.8	2,395.0	Base Pierre C&D Sand				
2,825.5	2,816.0	Pierre B Sand				
2,896.4	2,886.0	Base Pierre B Sand				
3,644.4	3,624.0	Pierre A Sand				
4,097.5	4,071.0	Base Pierre A Sand				
4,406.6	4,376.0	Parkman				
4,880.0	4,843.0	Base Parkman				
7,382.5	7,318.0	Lower Sharon Springs				
7,518.6	7,433.0	Lower Sharon Springs GR Marker				
7,573.2	7,475.0	Niobrara A Chalk				
7,582.7	7,482.0	Niobrara A Marl GR Marker				
7,585.5	7,484.0	Niobrara B1 Chalk				
7,629.1	7,515.0	Niobrara B1 Marl				
7,648.2	7,528.0	Niobrara B Chalk				
7,685.2	7,552.0	Niobrara B Marl				
7,790.3	7,612.0	Niobrara M Zone				
7,865.8	7,647.0	Niobrara M Zone Base				
7,958.4	7,680.0	Ft Hays				
8,053.4	7,702.0	Codell				
8,173.3	7,712.0	Codell target				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,700.0	1,700.0	0.0	0.0	KOP - Start Build 1.50	
5,883.3	5,832.9	-50.8	6.0	Start Drop -2.00	
7,048.4	6,995.9	-626.9	73.8	KOP #2 - Start Build 8.00	
17,882.4	7,712.0	-665.0	78.3	TD at 17882.4	



Fifth Creek Energy Company, LLC

Sec.29-T12N-R62W

Randall Creek 29 SESE Pad Sec.29-T12N-R62W

Randall Creek 503-2920H

Wellbore #1

Plan #1 (3-13-17)

Anticollision Report

14 March, 2017

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-13-17)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,200.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	3/14/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,882.4	Plan #1 (3-13-17) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells Sec.29-T12N-R62W						
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	1,400.0	1,400.0	400.1	395.5	86.840	CC
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	1,500.0	1,498.4	400.3	395.3	79.488	ES
Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1	9,900.0	8,345.9	897.3	838.7	15.331	SF
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	1,400.0	1,400.0	400.1	395.5	86.840	CC
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	1,500.0	1,498.4	400.3	395.3	79.488	ES
Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2	9,900.0	8,345.9	897.3	838.7	15.331	SF
Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1	7,019.4	6,977.4	470.1	437.7	14.517	CC, ES, SF
Randall Creek 29 SESE Pad Sec.29-T12N-R62W						
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	1,500.0	1,500.0	75.1	68.6	11.523	CC, ES
Randall Creek 214 - 2920H - Wellbore #1 - Plan #1 (3-13	17,882.4	17,852.5	959.5	578.8	2.520	SF
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	1,700.0	1,700.0	25.1	17.7	3.388	CC
Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3-13-	17,882.4	17,793.1	330.9	-25.5	0.929	Level 1, ES, SF
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	1,500.0	1,500.0	24.6	18.1	3.770	CC
Randall Creek 216-2920H - Wellbore #1 - Plan #1 (3-13-	17,882.4	17,786.2	377.0	16.2	1.045	Level 2, ES, SF
Randall Creek 504-2920H - Wellbore #1 - Plan #1 (3-13-	1,700.0	1,700.0	49.7	42.3	6.701	CC, ES
Randall Creek 504-2920H - Wellbore #1 - Plan #1 (3-13-	17,882.4	17,924.1	759.9	379.8	1.999	SF
Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3-13-	800.0	800.0	100.5	97.1	29.813	CC, ES
Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3-13-	1,200.0	1,189.4	119.1	114.1	23.553	SF

Offset Design	Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0 ft
Survey Program:	1415-MWD											Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	50.93	252.2	310.7	400.1				
100.0	100.0	100.0	100.0	0.1	0.1	50.93	252.2	310.7	400.1	399.9	0.22	1,778.743	
200.0	200.0	200.0	200.0	0.3	0.2	50.93	252.2	310.7	400.1	399.6	0.56	711.868	
300.0	300.0	300.0	300.0	0.6	0.3	50.93	252.2	310.7	400.1	399.2	0.90	444.975	
400.0	400.0	400.0	400.0	0.8	0.4	50.93	252.2	310.7	400.1	398.9	1.24	323.638	
500.0	500.0	500.0	500.0	1.0	0.6	50.93	252.2	310.7	400.1	398.6	1.57	254.295	
600.0	600.0	600.0	600.0	1.2	0.7	50.93	252.2	310.7	400.1	398.2	1.91	209.424	
700.0	700.0	700.0	700.0	1.5	0.8	50.93	252.2	310.7	400.1	397.9	2.25	178.013	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1415-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
800.0	800.0	800.0	800.0	1.7	0.9	50.93	252.2	310.7	400.1	397.5	2.58	154.796		
900.0	900.0	900.0	900.0	1.9	1.0	50.93	252.2	310.7	400.1	397.2	2.92	136.936		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	1.1	50.93	252.2	310.7	400.1	396.9	3.26	122.771		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	1.2	50.93	252.2	310.7	400.1	396.5	3.60	111.262		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	1.3	50.93	252.2	310.7	400.1	396.2	3.93	101.726		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	1.5	50.93	252.2	310.7	400.1	395.9	4.27	93.695		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	1.6	50.93	252.2	310.7	400.1	395.5	4.61	86.840 CC		
1,500.0	1,500.0	1,498.4	1,498.4	3.3	1.8	50.89	252.5	310.6	400.3	395.3	5.04	79.488 ES		
1,600.0	1,600.0	1,597.6	1,597.6	3.5	2.0	50.78	253.4	310.5	400.8	395.4	5.48	73.096		
1,700.0	1,700.0	1,696.8	1,696.8	3.7	2.2	50.62	254.7	310.4	401.5	395.6	5.93	67.703		
1,800.0	1,800.0	1,795.9	1,795.9	3.9	2.4	-122.99	256.4	310.2	403.2	396.8	6.35	63.508		
1,900.0	1,899.9	1,894.9	1,894.8	4.1	2.7	-123.62	258.2	310.1	406.5	399.7	6.74	60.305		
2,000.0	1,999.7	1,993.8	1,993.7	4.3	2.9	-124.53	260.3	310.1	411.5	404.4	7.14	57.651		
2,100.0	2,099.3	2,092.5	2,092.4	4.4	3.1	-125.69	262.5	310.2	418.3	410.8	7.54	55.463		
2,200.0	2,198.6	2,190.8	2,190.7	4.6	3.3	-127.08	264.9	310.2	427.1	419.1	7.96	53.684		
2,300.0	2,297.5	2,288.4	2,288.3	4.9	3.5	-128.65	267.5	310.4	437.9	429.5	8.38	52.275		
2,400.0	2,396.2	2,385.4	2,385.2	5.1	3.8	-130.42	270.3	310.6	450.6	441.8	8.81	51.122		
2,500.0	2,494.9	2,482.2	2,482.0	5.4	4.0	-132.13	273.3	311.0	464.1	454.8	9.26	50.109		
2,600.0	2,593.5	2,585.3	2,585.0	5.7	4.2	-133.82	276.1	311.4	477.6	467.9	9.70	49.231		
2,700.0	2,692.2	2,689.3	2,689.0	5.9	4.4	-135.36	277.6	311.6	490.3	480.2	10.15	48.332		
2,800.0	2,790.9	2,789.0	2,788.7	6.2	4.6	-136.70	278.1	311.7	502.6	492.0	10.57	47.529		
2,900.0	2,889.5	2,887.8	2,887.5	6.6	4.8	-137.93	278.4	311.9	515.1	504.1	11.00	46.815		
3,000.0	2,988.2	2,986.5	2,986.2	6.9	4.9	-139.08	278.6	312.4	527.7	516.3	11.44	46.149		
3,100.0	3,086.8	3,084.7	3,084.4	7.2	5.1	-140.16	278.7	313.0	540.6	528.8	11.88	45.492		
3,200.0	3,185.5	3,183.0	3,182.7	7.5	5.3	-141.17	278.7	313.7	553.8	541.5	12.33	44.900		
3,300.0	3,284.2	3,282.2	3,281.9	7.9	5.5	-142.13	278.8	314.6	567.1	554.3	12.79	44.355		
3,400.0	3,382.8	3,382.0	3,381.7	8.2	5.7	-143.03	278.6	315.6	580.4	567.2	13.24	43.841		
3,500.0	3,481.5	3,481.7	3,481.4	8.6	5.9	-143.87	278.1	316.6	593.7	580.0	13.69	43.355		
3,600.0	3,580.1	3,579.3	3,578.9	8.9	6.1	-144.67	277.7	317.6	607.1	593.0	14.15	42.913		
3,700.0	3,678.8	3,676.8	3,676.4	9.3	6.3	-145.46	277.6	318.4	620.8	606.2	14.60	42.523		
3,800.0	3,777.5	3,774.8	3,774.5	9.6	6.5	-146.23	277.7	319.0	634.8	619.8	15.06	42.157		
3,900.0	3,876.1	3,873.3	3,873.0	10.0	6.8	-146.99	277.9	319.7	649.0	633.4	15.52	41.807		
4,000.0	3,974.8	3,971.8	3,971.5	10.3	7.0	-147.71	278.2	320.3	663.2	647.3	15.99	41.487		
4,100.0	4,073.5	4,070.4	4,070.1	10.7	7.2	-148.41	278.5	320.9	677.6	661.2	16.45	41.200		
4,200.0	4,172.1	4,169.0	4,168.7	11.1	7.4	-149.11	278.9	321.2	692.1	675.2	16.91	40.938		
4,300.0	4,270.8	4,267.6	4,267.3	11.4	7.6	-149.79	279.4	321.2	706.7	689.3	17.36	40.704		
4,400.0	4,369.4	4,366.1	4,365.8	11.8	7.8	-150.45	279.9	321.3	721.4	703.6	17.81	40.495		
4,500.0	4,468.1	4,464.6	4,464.3	12.2	8.0	-151.08	280.4	321.4	736.2	717.9	18.27	40.303		
4,600.0	4,566.8	4,564.2	4,563.9	12.5	8.2	-151.70	280.8	321.5	751.0	732.3	18.71	40.130		
4,700.0	4,665.4	4,664.1	4,663.8	12.9	8.4	-152.30	281.2	321.4	765.7	746.6	19.16	39.963		
4,800.0	4,764.1	4,763.2	4,762.8	13.3	8.6	-152.88	281.4	321.2	780.4	760.8	19.61	39.801		
4,900.0	4,862.7	4,860.1	4,859.7	13.6	8.8	-153.44	281.9	320.7	795.2	775.2	20.05	39.660		
5,000.0	4,961.4	4,956.8	4,956.5	14.0	9.0	-154.01	282.6	320.0	810.4	789.9	20.49	39.543		
5,100.0	5,060.1	5,056.7	5,056.3	14.4	9.2	-154.61	283.6	319.0	825.7	804.8	20.94	39.428		
5,200.0	5,158.7	5,158.2	5,157.8	14.8	9.4	-155.21	284.4	317.5	840.8	819.4	21.39	39.303		
5,300.0	5,257.4	5,259.3	5,258.9	15.1	9.6	-155.82	285.0	315.4	855.6	833.8	21.84	39.176		
5,400.0	5,356.1	5,358.2	5,357.8	15.5	9.8	-156.42	285.5	313.1	870.4	848.1	22.28	39.064		
5,500.0	5,454.7	5,457.1	5,456.6	15.9	10.1	-157.00	286.0	310.7	885.2	862.5	22.72	38.960		
5,600.0	5,553.4	5,555.7	5,555.2	16.3	10.3	-157.57	286.5	308.3	900.1	876.9	23.16	38.864		
5,700.0	5,652.0	5,654.2	5,653.7	16.7	10.5	-158.10	286.9	306.0	915.0	891.4	23.60	38.773		
5,800.0	5,750.7	5,752.7	5,752.2	17.0	10.7	-158.60	287.2	304.0	930.0	906.0	24.04	38.687		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
	Sec.29-T12N-R62W		
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		1415-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,900.0	5,849.4	5,855.6	5,855.0	17.4	10.9	-159.10	287.3	302.1	944.8	920.3	24.49	38.579			
6,000.0	5,948.4	5,959.0	5,958.4	17.7	11.1	-159.59	286.8	300.5	957.1	932.2	24.95	38.361			
6,100.0	6,047.8	6,059.5	6,058.9	17.9	11.3	-159.94	286.0	299.0	965.8	940.5	25.38	38.056			
6,200.0	6,147.6	6,157.3	6,156.7	18.1	11.5	-160.16	285.1	298.1	971.4	945.7	25.78	37.686			
6,300.0	6,247.5	6,256.5	6,255.9	18.3	11.7	-160.27	284.3	297.6	973.9	947.8	26.15	37.242			
6,400.0	6,347.5	6,356.4	6,355.8	18.4	11.9	13.00	283.5	297.4	973.5	947.1	26.43	36.834			
6,500.0	6,447.5	6,453.7	6,453.1	18.6	12.1	13.01	282.8	297.4	972.8	946.0	26.82	36.276			
6,600.0	6,547.5	6,550.9	6,550.3	18.7	12.3	13.02	282.4	297.4	972.4	945.2	27.21	35.742			
6,700.0	6,647.5	6,648.1	6,647.5	18.9	12.5	13.03	282.2	297.5	972.2	944.6	27.60	35.230			
6,701.5	6,649.0	6,649.6	6,649.0	18.9	12.5	13.03	282.2	297.5	972.2	944.6	27.60	35.222			
6,800.0	6,747.5	6,745.2	6,744.6	19.0	12.7	13.05	282.2	297.9	972.4	944.4	27.99	34.739			
6,900.0	6,847.5	6,799.0	6,798.4	19.1	12.8	13.04	283.0	297.8	974.3	946.0	28.29	34.438			
7,000.0	6,947.5	6,845.3	6,844.5	19.3	12.9	12.89	286.6	296.1	981.6	953.1	28.57	34.355			
7,100.0	7,047.4	6,882.9	6,881.5	19.4	13.0	10.66	292.5	293.2	993.4	964.7	28.75	34.557			
7,200.0	7,146.4	6,926.0	6,923.1	19.4	13.1	10.24	302.4	288.3	999.4	971.2	28.26	35.368			
7,300.0	7,242.3	6,957.0	6,952.3	19.4	13.2	9.97	311.6	283.5	998.0	970.8	27.20	36.685			
7,400.0	7,333.5	6,989.0	6,981.7	19.2	13.3	9.75	322.9	277.6	989.2	963.5	25.64	38.580			
7,500.0	7,418.1	7,032.6	7,020.2	18.9	13.4	9.41	340.8	267.8	972.8	949.1	23.62	41.176			
7,600.0	7,494.5	7,072.3	7,053.4	18.7	13.6	9.10	359.7	257.0	949.2	928.0	21.20	44.769			
7,700.0	7,561.2	7,116.0	7,088.1	18.4	13.7	8.70	382.4	243.3	918.0	899.5	18.48	49.679			
7,800.0	7,616.9	7,158.8	7,120.2	18.2	13.9	8.24	406.4	228.1	879.1	863.5	15.59	56.389			
7,900.0	7,660.5	7,195.3	7,145.7	18.2	14.1	7.83	428.1	213.7	833.2	820.4	12.78	65.202			
8,000.0	7,691.1	7,227.1	7,166.3	18.2	14.3	7.47	448.3	200.3	781.1	770.6	10.46	74.646			
8,100.0	7,708.3	7,256.4	7,183.8	18.5	14.5	7.10	467.9	187.4	723.3	714.1	9.21	78.536			
8,200.0	7,712.0	7,285.6	7,199.6	18.9	14.8	6.37	488.6	174.1	660.8	651.5	9.33	70.830			
8,300.0	7,712.0	7,320.4	7,216.4	19.5	15.1	4.61	514.1	157.6	601.3	591.7	9.63	62.432			
8,400.0	7,712.0	7,359.4	7,233.1	20.3	15.5	2.36	543.7	138.4	548.7	538.7	10.07	54.515			
8,500.0	7,712.0	7,402.0	7,248.5	21.0	15.9	-0.40	576.8	116.5	504.6	493.9	10.77	46.870			
8,600.0	7,712.0	7,434.0	7,257.8	21.9	16.3	-2.66	602.3	99.5	471.4	459.7	11.71	40.260			
8,700.0	7,712.0	7,476.0	7,266.5	23.1	16.8	-5.77	636.4	76.7	451.5	438.4	13.07	34.544			
8,790.0	7,712.0	7,515.9	7,271.4	24.2	17.4	-8.79	669.4	54.6	445.8	431.2	14.66	30.409			
8,800.0	7,712.0	7,520.6	7,271.8	24.3	17.4	-9.14	673.2	52.1	445.9	431.0	14.86	30.010			
8,900.0	7,712.0	7,586.1	7,275.8	25.6	18.4	-14.01	727.6	15.8	452.8	435.1	17.63	25.685			
9,000.0	7,712.0	7,654.3	7,278.9	27.0	19.4	-19.15	783.0	-23.9	469.0	448.0	21.02	22.311			
9,100.0	7,712.0	7,711.8	7,280.6	28.5	20.4	-23.55	827.6	-60.0	495.6	471.3	24.39	20.318			
9,200.0	7,712.0	7,781.0	7,281.7	30.0	21.7	-28.56	880.7	-104.5	530.8	502.3	28.48	18.638			
9,300.0	7,712.0	7,855.9	7,283.6	31.6	23.0	-33.63	937.4	-153.3	571.5	538.6	32.92	17.361			
9,400.0	7,712.0	7,930.3	7,285.9	33.2	24.5	-38.25	993.2	-202.5	617.6	580.2	37.34	16.537			
9,500.0	7,712.0	7,980.6	7,287.0	34.8	25.5	-41.09	1,030.8	-235.9	668.2	627.5	40.67	16.428			
9,600.0	7,712.0	8,042.5	7,285.3	36.4	26.7	-44.10	1,076.8	-277.3	724.1	679.7	44.33	16.334			
9,700.0	7,712.0	8,112.5	7,283.2	38.1	28.2	-47.13	1,128.8	-324.1	782.3	734.2	48.18	16.238			
9,800.0	7,712.0	8,210.0	7,282.6	39.8	30.2	-50.92	1,202.0	-388.5	840.6	787.7	52.89	15.894			
9,900.0	7,712.0	8,345.9	7,283.7	41.5	33.1	-55.27	1,307.5	-474.0	897.3	838.7	58.53	15.331 SF			
10,000.0	7,712.0	8,413.0	7,282.3	43.3	34.6	-56.91	1,361.6	-513.8	952.8	890.9	61.87	15.399			
10,100.0	7,712.0	8,481.1	7,280.0	45.0	36.1	-58.38	1,416.2	-554.4	1,009.9	944.7	65.20	15.490			
10,200.0	7,712.0	8,576.1	7,277.5	46.8	38.1	-60.30	1,491.8	-611.8	1,068.3	999.1	69.19	15.439			
10,300.0	7,712.0	8,654.8	7,278.8	48.6	39.9	-61.88	1,555.0	-658.7	1,124.9	1,052.1	72.81	15.449			
10,400.0	7,712.0	8,712.9	7,279.3	50.4	41.2	-62.95	1,601.1	-694.1	1,183.5	1,107.6	75.90	15.593			

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2												Offset Site Error:	0.0 ft
Survey Program: 1415-MWD, 9999-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	50.93	252.2	310.7	400.1				
100.0	100.0	100.0	100.0	0.1	0.1	50.93	252.2	310.7	400.1	399.9	0.22	1,778.743	
200.0	200.0	200.0	200.0	0.3	0.2	50.93	252.2	310.7	400.1	399.6	0.56	711.868	
300.0	300.0	300.0	300.0	0.6	0.3	50.93	252.2	310.7	400.1	399.2	0.90	444.975	
400.0	400.0	400.0	400.0	0.8	0.4	50.93	252.2	310.7	400.1	398.9	1.24	323.638	
500.0	500.0	500.0	500.0	1.0	0.6	50.93	252.2	310.7	400.1	398.6	1.57	254.295	
600.0	600.0	600.0	600.0	1.2	0.7	50.93	252.2	310.7	400.1	398.2	1.91	209.424	
700.0	700.0	700.0	700.0	1.5	0.8	50.93	252.2	310.7	400.1	397.9	2.25	178.013	
800.0	800.0	800.0	800.0	1.7	0.9	50.93	252.2	310.7	400.1	397.5	2.58	154.796	
900.0	900.0	900.0	900.0	1.9	1.0	50.93	252.2	310.7	400.1	397.2	2.92	136.936	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	1.1	50.93	252.2	310.7	400.1	396.9	3.26	122.771	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	1.2	50.93	252.2	310.7	400.1	396.5	3.60	111.262	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	1.3	50.93	252.2	310.7	400.1	396.2	3.93	101.726	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	1.5	50.93	252.2	310.7	400.1	395.9	4.27	93.695	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	1.6	50.93	252.2	310.7	400.1	395.5	4.61	86.840 CC	
1,500.0	1,500.0	1,498.4	1,498.4	3.3	1.8	50.89	252.5	310.6	400.3	395.3	5.04	79.488 ES	
1,600.0	1,600.0	1,597.6	1,597.6	3.5	2.0	50.78	253.4	310.5	400.8	395.4	5.48	73.096	
1,700.0	1,700.0	1,696.8	1,696.8	3.7	2.2	50.62	254.7	310.4	401.5	395.6	5.93	67.703	
1,800.0	1,800.0	1,795.9	1,795.9	3.9	2.4	-122.99	256.4	310.2	403.2	396.8	6.35	63.508	
1,900.0	1,899.9	1,894.9	1,894.8	4.1	2.7	-123.62	258.2	310.1	406.5	399.7	6.74	60.305	
2,000.0	1,999.7	1,993.8	1,993.7	4.3	2.9	-124.53	260.3	310.1	411.5	404.4	7.14	57.651	
2,100.0	2,099.3	2,092.5	2,092.4	4.4	3.1	-125.69	262.5	310.2	418.3	410.8	7.54	55.463	
2,200.0	2,198.6	2,190.8	2,190.7	4.6	3.3	-127.08	264.9	310.2	427.1	419.1	7.96	53.684	
2,300.0	2,297.5	2,288.4	2,288.3	4.9	3.5	-128.65	267.5	310.4	437.9	429.5	8.38	52.275	
2,400.0	2,396.2	2,385.4	2,385.2	5.1	3.8	-130.42	270.3	310.6	450.6	441.8	8.81	51.122	
2,500.0	2,494.9	2,482.2	2,482.0	5.4	4.0	-132.13	273.3	311.0	464.1	454.8	9.26	50.109	
2,600.0	2,593.5	2,585.3	2,585.0	5.7	4.2	-133.82	276.1	311.4	477.6	467.9	9.70	49.231	
2,700.0	2,692.2	2,689.3	2,689.0	5.9	4.4	-135.36	277.6	311.6	490.3	480.2	10.15	48.332	
2,800.0	2,790.9	2,789.0	2,788.7	6.2	4.6	-136.70	278.1	311.7	502.6	492.0	10.57	47.529	
2,900.0	2,889.5	2,887.8	2,887.5	6.6	4.8	-137.93	278.4	311.9	515.1	504.1	11.00	46.815	
3,000.0	2,988.2	2,986.5	2,986.2	6.9	4.9	-139.08	278.6	312.4	527.7	516.3	11.44	46.149	
3,100.0	3,086.8	3,084.7	3,084.4	7.2	5.1	-140.16	278.7	313.0	540.6	528.8	11.88	45.492	
3,200.0	3,185.5	3,183.0	3,182.7	7.5	5.3	-141.17	278.7	313.7	553.8	541.5	12.33	44.900	
3,300.0	3,284.2	3,282.2	3,281.9	7.9	5.5	-142.13	278.8	314.6	567.1	554.3	12.79	44.355	
3,400.0	3,382.8	3,382.0	3,381.7	8.2	5.7	-143.03	278.6	315.6	580.4	567.2	13.24	43.841	
3,500.0	3,481.5	3,481.7	3,481.4	8.6	5.9	-143.87	278.1	316.6	593.7	580.0	13.69	43.355	
3,600.0	3,580.1	3,579.3	3,578.9	8.9	6.1	-144.67	277.7	317.6	607.1	593.0	14.15	42.913	
3,700.0	3,678.8	3,676.8	3,676.4	9.3	6.3	-145.46	277.6	318.4	620.8	606.2	14.60	42.523	
3,800.0	3,777.5	3,774.8	3,774.5	9.6	6.5	-146.23	277.7	319.0	634.8	619.8	15.06	42.157	
3,900.0	3,876.1	3,873.3	3,873.0	10.0	6.8	-146.99	277.9	319.7	649.0	633.4	15.52	41.807	
4,000.0	3,974.8	3,971.8	3,971.5	10.3	7.0	-147.71	278.2	320.3	663.2	647.3	15.99	41.487	
4,100.0	4,073.5	4,070.4	4,070.1	10.7	7.2	-148.41	278.5	320.9	677.6	661.2	16.45	41.200	
4,200.0	4,172.1	4,169.0	4,168.7	11.1	7.4	-149.11	278.9	321.2	692.1	675.2	16.91	40.938	
4,300.0	4,270.8	4,267.6	4,267.3	11.4	7.6	-149.79	279.4	321.2	706.7	689.3	17.36	40.704	
4,400.0	4,369.4	4,366.1	4,365.8	11.8	7.8	-150.45	279.9	321.3	721.4	703.6	17.81	40.495	
4,500.0	4,468.1	4,464.6	4,464.3	12.2	8.0	-151.08	280.4	321.4	736.2	717.9	18.27	40.303	
4,600.0	4,566.8	4,564.2	4,563.9	12.5	8.2	-151.70	280.8	321.5	751.0	732.3	18.71	40.130	
4,700.0	4,665.4	4,664.1	4,663.8	12.9	8.4	-152.30	281.2	321.4	765.7	746.6	19.16	39.963	
4,800.0	4,764.1	4,763.2	4,762.8	13.3	8.6	-152.88	281.4	321.2	780.4	760.8	19.61	39.801	
4,900.0	4,862.7	4,860.1	4,859.7	13.6	8.8	-153.44	281.9	320.7	795.2	775.2	20.05	39.660	
5,000.0	4,961.4	4,956.8	4,956.5	14.0	9.0	-154.01	282.6	320.0	810.4	789.9	20.49	39.543	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2											Offset Site Error:		0.0 ft
Survey Program:		1415-MWD, 9999-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,100.0	5,060.1	5,056.7	5,056.3	14.4	9.2	-154.61	283.6	319.0	825.7	804.8	20.94	39.428			
5,200.0	5,158.7	5,158.2	5,157.8	14.8	9.4	-155.21	284.4	317.5	840.8	819.4	21.39	39.303			
5,300.0	5,257.4	5,259.3	5,258.9	15.1	9.6	-155.82	285.0	315.4	855.6	833.8	21.84	39.176			
5,400.0	5,356.1	5,358.2	5,357.8	15.5	9.8	-156.42	285.5	313.1	870.4	848.1	22.28	39.064			
5,500.0	5,454.7	5,457.1	5,456.6	15.9	10.1	-157.00	286.0	310.7	885.2	862.5	22.72	38.960			
5,600.0	5,553.4	5,555.7	5,555.2	16.3	10.3	-157.57	286.5	308.3	900.1	876.9	23.16	38.864			
5,700.0	5,652.0	5,654.2	5,653.7	16.7	10.5	-158.10	286.9	306.0	915.0	891.4	23.60	38.773			
5,800.0	5,750.7	5,752.7	5,752.2	17.0	10.7	-158.60	287.2	304.0	930.0	906.0	24.04	38.687			
5,900.0	5,849.4	5,855.6	5,855.0	17.4	10.9	-159.10	287.3	302.1	944.8	920.3	24.49	38.579			
6,000.0	5,948.4	5,959.0	5,958.4	17.7	11.1	-159.59	286.8	300.5	957.1	932.2	24.95	38.361			
6,100.0	6,047.8	6,059.5	6,058.9	17.9	11.3	-159.94	286.0	299.0	965.8	940.5	25.38	38.056			
6,200.0	6,147.6	6,157.3	6,156.7	18.1	11.5	-160.16	285.1	298.1	971.4	945.7	25.78	37.686			
6,300.0	6,247.5	6,256.5	6,255.9	18.3	11.7	-160.27	284.3	297.6	973.9	947.8	26.15	37.242			
6,400.0	6,347.5	6,356.4	6,355.8	18.4	11.9	13.00	283.5	297.4	973.5	947.1	26.43	36.834			
6,500.0	6,447.5	6,453.7	6,453.1	18.6	12.1	13.01	282.8	297.4	972.8	946.0	26.82	36.276			
6,600.0	6,547.5	6,550.9	6,550.3	18.7	12.3	13.02	282.4	297.4	972.4	945.2	27.21	35.742			
6,700.0	6,647.5	6,648.1	6,647.5	18.9	12.5	13.03	282.2	297.5	972.2	944.6	27.60	35.230			
6,701.5	6,649.0	6,649.6	6,649.0	18.9	12.5	13.03	282.2	297.5	972.2	944.6	27.60	35.222			
6,800.0	6,747.5	6,745.2	6,744.6	19.0	12.7	13.05	282.2	297.9	972.4	944.4	27.99	34.739			
6,900.0	6,847.5	6,799.0	6,798.4	19.1	12.8	13.04	283.0	297.8	974.3	946.0	28.29	34.438			
7,000.0	6,947.5	6,845.3	6,844.5	19.3	12.9	12.89	286.6	296.1	981.6	953.1	28.57	34.355			
7,100.0	7,047.4	6,882.9	6,881.5	19.4	13.0	10.66	292.5	293.2	993.4	964.7	28.75	34.557			
7,200.0	7,146.4	6,926.0	6,923.1	19.4	13.1	10.24	302.4	288.3	999.4	971.2	28.26	35.368			
7,300.0	7,242.3	6,957.0	6,952.3	19.4	13.2	9.97	311.6	283.5	998.0	970.8	27.20	36.685			
7,400.0	7,333.5	6,989.0	6,981.7	19.2	13.3	9.75	322.9	277.6	989.2	963.5	25.64	38.580			
7,500.0	7,418.1	7,032.6	7,020.2	18.9	13.4	9.41	340.8	267.8	972.8	949.1	23.62	41.176			
7,600.0	7,494.5	7,072.3	7,053.4	18.7	13.6	9.10	359.7	257.0	949.2	928.0	21.20	44.769			
7,700.0	7,561.2	7,116.0	7,088.1	18.4	13.7	8.70	382.4	243.3	918.0	899.5	18.48	49.679			
7,800.0	7,616.9	7,158.8	7,120.2	18.2	13.9	8.24	406.4	228.1	879.1	863.5	15.59	56.389			
7,900.0	7,660.5	7,195.3	7,145.7	18.2	14.1	7.83	428.1	213.7	833.2	820.4	12.78	65.202			
8,000.0	7,691.1	7,227.1	7,166.3	18.2	14.3	7.47	448.3	200.3	781.1	770.6	10.46	74.646			
8,100.0	7,708.3	7,256.4	7,183.8	18.5	14.5	7.10	467.9	187.4	723.3	714.1	9.21	78.536			
8,200.0	7,712.0	7,285.6	7,199.6	18.9	14.8	6.37	488.6	174.1	660.8	651.5	9.33	70.830			
8,300.0	7,712.0	7,320.4	7,216.4	19.5	15.1	4.61	514.1	157.6	601.3	591.7	9.63	62.432			
8,400.0	7,712.0	7,359.4	7,233.1	20.3	15.5	2.36	543.7	138.4	548.7	538.7	10.07	54.515			
8,500.0	7,712.0	7,402.0	7,248.5	21.0	15.9	-0.40	576.8	116.5	504.6	493.9	10.77	46.870			
8,600.0	7,712.0	7,434.0	7,257.8	21.9	16.3	-2.66	602.3	99.5	471.4	459.7	11.71	40.260			
8,700.0	7,712.0	7,476.0	7,266.5	23.1	16.8	-5.77	636.4	76.7	451.5	438.4	13.07	34.544			
8,790.0	7,712.0	7,515.9	7,271.4	24.2	17.4	-8.79	669.4	54.6	445.8	431.2	14.66	30.409			
8,800.0	7,712.0	7,520.6	7,271.8	24.3	17.4	-9.14	673.2	52.1	445.9	431.0	14.86	30.010			
8,900.0	7,712.0	7,586.1	7,275.8	25.6	18.4	-14.01	727.6	15.8	452.8	435.1	17.63	25.685			
9,000.0	7,712.0	7,654.3	7,278.9	27.0	19.4	-19.15	783.0	-23.9	469.0	448.0	21.02	22.311			
9,100.0	7,712.0	7,711.8	7,280.6	28.5	20.4	-23.55	827.6	-60.0	495.6	471.3	24.39	20.318			
9,200.0	7,712.0	7,781.0	7,281.7	30.0	21.7	-28.56	880.7	-104.5	530.8	502.3	28.48	18.638			
9,300.0	7,712.0	7,855.9	7,283.6	31.6	23.0	-33.63	937.4	-153.3	571.5	538.6	32.92	17.361			
9,400.0	7,712.0	7,930.3	7,285.9	33.2	24.5	-38.25	993.2	-202.5	617.6	580.2	37.34	16.537			
9,500.0	7,712.0	7,980.6	7,287.0	34.8	25.5	-41.09	1,030.8	-235.9	668.2	627.5	40.67	16.428			
9,600.0	7,712.0	8,042.5	7,285.3	36.4	26.7	-44.10	1,076.8	-277.3	724.1	679.7	44.33	16.334			
9,700.0	7,712.0	8,112.5	7,283.2	38.1	28.2	-47.13	1,128.8	-324.1	782.3	734.2	48.18	16.238			
9,800.0	7,712.0	8,210.0	7,282.6	39.8	30.2	-50.92	1,202.0	-388.5	840.6	787.7	52.89	15.894			
9,900.0	7,712.0	8,345.9	7,283.7	41.5	33.1	-55.27	1,307.5	-474.0	897.3	838.7	58.53	15.331 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Existing Wells Sec.29-T12N-R62W - Randall Creek 2-29H (Exist.) - Wellbore #2 - Wellbore #2												Offset Well Error:	0.0 ft
Survey Program:		1415-MWD, 9999-MWD											
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,000.0	7,712.0	8,413.0	7,282.3	43.3	34.6	-56.91	1,361.6	-513.8	952.8	890.9	61.87	15.399	
10,100.0	7,712.0	8,481.1	7,280.0	45.0	36.1	-58.38	1,416.2	-554.4	1,009.9	944.7	65.20	15.490	
10,200.0	7,712.0	8,576.1	7,277.5	46.8	38.1	-60.30	1,491.8	-611.8	1,068.3	999.1	69.19	15.439	
10,300.0	7,712.0	8,654.8	7,278.8	48.6	39.9	-61.88	1,555.0	-658.7	1,124.9	1,052.1	72.81	15.449	
10,400.0	7,712.0	8,712.9	7,279.3	50.4	41.2	-62.95	1,601.1	-694.1	1,183.5	1,107.6	75.90	15.593	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.29-T12N-R62W - Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:		0.0 ft	
Survey Program:		1409-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
0.0	0.0	1.0	1.0	0.0	0.0	-151.42	-756.0	-411.7	860.8								
100.0	100.0	101.0	101.0	0.1	0.1	-151.42	-756.0	-411.7	860.8	860.6	0.23	3,807.686					
200.0	200.0	201.0	201.0	0.3	0.2	-151.42	-756.0	-411.7	860.8	860.3	0.56	1,528.425					
300.0	300.0	301.0	301.0	0.6	0.3	-151.42	-756.0	-411.7	860.8	859.9	0.90	956.105					
400.0	400.0	401.0	401.0	0.8	0.5	-151.42	-756.0	-411.7	860.8	859.6	1.24	695.627					
500.0	500.0	501.0	501.0	1.0	0.6	-151.42	-756.0	-411.7	860.8	859.3	1.57	546.689					
600.0	600.0	601.0	601.0	1.2	0.7	-151.42	-756.0	-411.7	860.8	858.9	1.91	450.281					
700.0	700.0	701.0	701.0	1.5	0.8	-151.42	-756.0	-411.7	860.8	858.6	2.25	382.778					
800.0	800.0	801.0	801.0	1.7	0.9	-151.42	-756.0	-411.7	860.8	858.2	2.59	332.876					
900.0	900.0	901.0	901.0	1.9	1.0	-151.42	-756.0	-411.7	860.8	857.9	2.92	294.485					
1,000.0	1,000.0	1,001.0	1,001.0	2.1	1.1	-151.42	-756.0	-411.7	860.8	857.6	3.26	264.033					
1,100.0	1,100.0	1,101.0	1,101.0	2.4	1.2	-151.42	-756.0	-411.7	860.8	857.2	3.60	239.289					
1,200.0	1,200.0	1,201.0	1,201.0	2.6	1.3	-151.42	-756.0	-411.7	860.8	856.9	3.93	218.786					
1,300.0	1,300.0	1,301.0	1,301.0	2.8	1.5	-151.42	-756.0	-411.7	860.8	856.6	4.27	201.518					
1,400.0	1,400.0	1,401.0	1,401.0	3.0	1.6	-151.42	-756.0	-411.7	860.8	856.2	4.61	186.777					
1,500.0	1,500.0	1,488.7	1,488.7	3.3	1.7	-151.38	-756.5	-412.8	861.9	856.9	4.99	172.717					
1,600.0	1,600.0	1,583.8	1,583.8	3.5	1.9	-151.33	-757.5	-414.3	863.6	858.2	5.39	160.290					
1,700.0	1,700.0	1,680.5	1,680.4	3.7	2.1	-151.28	-759.0	-416.0	865.8	860.0	5.80	149.302					
1,800.0	1,800.0	1,783.0	1,782.9	3.9	2.3	35.55	-760.6	-418.0	867.0	860.8	6.21	139.651					
1,900.0	1,899.9	1,885.5	1,885.4	4.1	2.5	35.77	-761.9	-419.7	865.7	859.1	6.60	131.262					
2,000.0	1,999.7	1,986.8	1,986.7	4.3	2.7	36.11	-763.1	-421.1	862.1	855.1	6.99	123.399					
2,100.0	2,099.3	2,084.7	2,084.6	4.4	3.0	36.56	-764.1	-422.6	865.5	849.1	7.37	116.155					
2,200.0	2,198.6	2,182.4	2,182.2	4.6	3.2	37.16	-765.3	-424.4	849.0	841.2	7.77	109.324					
2,300.0	2,297.5	2,281.5	2,281.3	4.9	3.4	37.91	-766.5	-426.4	839.6	831.5	8.17	102.773					
2,400.0	2,396.2	2,382.0	2,381.8	5.1	3.6	38.72	-767.6	-428.5	828.8	820.2	8.60	96.402					
2,500.0	2,494.9	2,482.2	2,482.0	5.4	3.8	39.52	-768.4	-430.4	817.8	808.8	9.04	90.463					
2,600.0	2,593.5	2,581.5	2,581.3	5.7	4.0	40.35	-769.1	-432.4	806.9	797.4	9.50	84.957					
2,700.0	2,692.2	2,680.8	2,680.5	5.9	4.2	41.22	-769.6	-434.6	796.1	786.2	9.97	79.886					
2,800.0	2,790.9	2,779.3	2,779.0	6.2	4.5	42.11	-770.0	-436.8	785.5	775.1	10.43	75.297					
2,900.0	2,889.5	2,877.5	2,877.2	6.6	4.7	43.02	-770.5	-438.9	775.1	764.2	10.90	71.091					
3,000.0	2,988.2	2,975.9	2,975.5	6.9	4.9	43.95	-771.0	-441.1	764.9	753.6	11.38	67.207					
3,100.0	3,086.8	3,075.2	3,074.8	7.2	5.1	44.91	-771.6	-443.2	755.0	743.1	11.87	63.622					
3,200.0	3,185.5	3,174.6	3,174.2	7.5	5.3	45.88	-772.2	-445.1	745.1	732.8	12.36	60.288					
3,300.0	3,284.2	3,275.0	3,274.6	7.9	5.5	46.88	-772.8	-446.9	735.4	722.5	12.87	57.149					
3,400.0	3,382.8	3,376.2	3,375.8	8.2	5.7	47.90	-773.3	-448.3	725.5	712.2	13.39	54.188					
3,500.0	3,481.5	3,477.7	3,477.3	8.6	5.9	48.92	-773.7	-449.3	715.6	701.7	13.92	51.410					
3,600.0	3,580.1	3,582.9	3,582.4	8.9	6.1	49.98	-774.0	-449.5	705.2	690.7	14.47	48.746					
3,700.0	3,678.8	3,688.0	3,687.6	9.3	6.3	51.01	-774.0	-448.4	694.1	679.0	15.02	46.210					
3,800.0	3,777.5	3,788.7	3,788.3	9.6	6.6	51.98	-773.9	-446.6	682.4	666.9	15.56	43.845					
3,900.0	3,876.1	3,887.2	3,886.7	10.0	6.8	52.95	-773.9	-444.6	671.0	654.9	16.11	41.652					
4,000.0	3,974.8	3,985.6	3,985.1	10.3	7.0	53.94	-774.0	-442.6	659.8	643.1	16.66	39.602					
4,100.0	4,073.5	4,083.6	4,083.1	10.7	7.2	54.97	-774.0	-440.7	648.8	631.6	17.21	37.692					
4,200.0	4,172.1	4,181.6	4,181.0	11.1	7.4	56.05	-774.0	-439.1	638.2	620.4	17.77	35.906					
4,300.0	4,270.8	4,280.3	4,279.7	11.4	7.6	57.21	-773.8	-437.7	627.9	609.6	18.35	34.225					
4,400.0	4,369.4	4,379.8	4,379.2	11.8	7.8	58.41	-773.5	-436.2	617.8	598.9	18.93	32.633					
4,500.0	4,468.1	4,479.3	4,478.7	12.2	8.0	59.65	-773.1	-434.5	607.8	588.3	19.52	31.134					
4,600.0	4,566.8	4,579.3	4,578.7	12.5	8.2	60.94	-772.7	-432.8	598.0	577.8	20.13	29.710					
4,700.0	4,665.4	4,679.3	4,678.7	12.9	8.4	62.28	-772.0	-430.9	588.2	567.4	20.74	28.363					
4,800.0	4,764.1	4,778.8	4,778.2	13.3	8.6	63.67	-771.1	-428.8	578.5	557.1	21.35	27.094					
4,900.0	4,862.7	4,877.6	4,876.9	13.6	8.8	65.09	-770.2	-426.7	569.0	547.1	21.96	25.906					
5,000.0	4,961.4	4,976.5	4,975.8	14.0	9.0	66.54	-769.4	-424.5	559.9	537.3	22.58	24.792					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T12N-R62W - Randall Creek 4-32H (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 1409-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.0	5,060.1	5,075.7	5,075.0	14.4	9.2	68.04	-768.5	-422.2	551.1	527.8	23.21	23.744	CC, ES, SF	
5,200.0	5,158.7	5,175.0	5,174.3	14.8	9.5	69.60	-767.6	-419.7	542.5	518.6	23.84	22.758		
5,300.0	5,257.4	5,273.8	5,273.0	15.1	9.7	71.20	-766.5	-417.2	534.2	509.7	24.47	21.833		
5,400.0	5,356.1	5,371.3	5,370.5	15.5	9.9	72.81	-765.7	-414.8	526.4	501.3	25.09	20.982		
5,500.0	5,454.7	5,469.0	5,468.1	15.9	10.1	74.43	-765.2	-412.4	519.2	493.5	25.71	20.194		
5,600.0	5,553.4	5,566.7	5,565.8	16.3	10.3	76.06	-765.1	-410.0	512.7	486.4	26.33	19.472		
5,700.0	5,652.0	5,664.5	5,663.6	16.7	10.5	77.71	-765.2	-407.7	506.8	479.8	26.94	18.809		
5,800.0	5,750.7	5,762.4	5,761.4	17.0	10.7	79.37	-765.6	-405.5	501.5	473.9	27.56	18.198		
5,900.0	5,849.4	5,860.1	5,859.1	17.4	10.9	81.04	-766.1	-403.5	496.8	468.6	28.16	17.642		
6,000.0	5,948.4	5,958.1	5,957.1	17.7	11.1	82.42	-766.6	-401.6	493.1	464.4	28.65	17.212		
6,100.0	6,047.8	6,058.1	6,057.1	17.9	11.3	83.48	-767.1	-399.9	490.2	461.1	29.11	16.843		
6,200.0	6,147.6	6,159.3	6,158.3	18.1	11.5	84.18	-767.3	-397.9	487.6	458.0	29.53	16.511		
6,300.0	6,247.5	6,258.5	6,257.4	18.3	11.7	84.48	-767.5	-396.0	485.4	455.4	29.91	16.227		
6,400.0	6,347.5	6,358.8	6,357.7	18.4	11.9	-102.28	-767.8	-394.0	483.4	453.2	30.24	15.986		
6,500.0	6,447.5	6,457.4	6,456.4	18.6	12.1	-102.39	-768.3	-392.0	481.6	451.0	30.59	15.747		
6,600.0	6,547.5	6,557.4	6,556.3	18.7	12.3	-102.48	-768.7	-390.3	480.0	449.0	30.93	15.516		
6,700.0	6,647.5	6,658.3	6,657.2	18.9	12.5	-102.59	-769.3	-388.4	478.3	447.0	31.29	15.285		
6,800.0	6,747.5	6,757.8	6,756.6	19.0	12.7	-102.68	-769.6	-386.6	476.6	444.9	31.64	15.061		
6,900.0	6,847.5	6,868.4	6,866.6	19.1	13.0	-103.72	-777.3	-381.9	474.1	442.1	32.00	14.813		
7,000.0	6,947.5	6,963.7	6,956.9	19.3	13.2	-107.34	-805.1	-370.5	470.2	437.9	32.29	14.563		
7,019.4	6,966.9	6,977.4	6,969.3	19.3	13.2	-109.97	-810.6	-368.6	470.1	437.7	32.38	14.517		
7,100.0	7,047.4	7,039.4	7,023.8	19.4	13.4	-113.49	-838.7	-359.9	472.8	440.2	32.55	14.524		
7,200.0	7,146.4	7,108.7	7,080.4	19.4	13.6	-117.97	-876.8	-347.8	488.3	455.8	32.53	15.010		
7,300.0	7,242.3	7,157.4	7,116.9	19.4	13.9	-120.29	-907.3	-337.4	521.4	489.1	32.28	16.151		
7,400.0	7,333.5	7,178.0	7,131.4	19.2	14.0	-118.32	-921.1	-332.5	573.1	541.0	32.02	17.896		
7,500.0	7,418.1	7,194.8	7,142.8	18.9	14.1	-113.81	-932.8	-328.4	640.2	608.3	31.95	20.041		
7,600.0	7,494.5	7,197.6	7,144.6	18.7	14.1	-104.68	-934.8	-327.7	718.4	686.1	32.22	22.296		
7,700.0	7,561.2	7,193.9	7,142.1	18.4	14.0	-91.48	-932.1	-328.6	803.1	770.8	32.32	24.849		
7,800.0	7,616.9	7,178.0	7,131.4	18.2	14.0	-74.89	-921.1	-332.5	891.2	860.2	30.95	28.789		
7,900.0	7,660.5	7,178.0	7,131.4	18.2	14.0	-60.86	-921.1	-332.5	979.6	951.5	28.15	34.798		
8,000.0	7,691.1	7,156.9	7,116.5	18.2	13.9	-47.98	-907.0	-337.5	1,066.7	1,042.5	24.14	44.189		
8,100.0	7,708.3	7,146.0	7,108.6	18.5	13.8	-39.01	-899.9	-340.0	1,150.7	1,129.9	20.81	55.292		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset				Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-75.1	75.1					
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-75.1	75.1	74.9	0.22	334.173		
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-75.1	75.1	74.4	0.67	111.391		
300.0	300.0	300.0	300.0	0.6	0.6	-89.97	0.0	-75.1	75.1	74.0	1.12	66.835		
400.0	400.0	400.0	400.0	0.8	0.8	-89.97	0.0	-75.1	75.1	73.5	1.57	47.739		
500.0	500.0	500.0	500.0	1.0	1.0	-89.97	0.0	-75.1	75.1	73.1	2.02	37.130		
600.0	600.0	600.0	600.0	1.2	1.2	-89.97	0.0	-75.1	75.1	72.6	2.47	30.379		
700.0	700.0	700.0	700.0	1.5	1.5	-89.97	0.0	-75.1	75.1	72.2	2.92	25.706		
800.0	800.0	800.0	800.0	1.7	1.7	-89.97	0.0	-75.1	75.1	71.7	3.37	22.278		
900.0	900.0	900.0	900.0	1.9	1.9	-89.97	0.0	-75.1	75.1	71.3	3.82	19.657		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.97	0.0	-75.1	75.1	70.8	4.27	17.588		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.97	0.0	-75.1	75.1	70.4	4.72	15.913		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.97	0.0	-75.1	75.1	69.9	5.17	14.529		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.97	0.0	-75.1	75.1	69.5	5.62	13.367		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.97	0.0	-75.1	75.1	69.0	6.07	12.377		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.97	0.0	-75.1	75.1	68.6	6.52	11.523 CC, ES		
1,600.0	1,600.0	1,598.5	1,598.5	3.5	3.5	-90.59	-0.8	-76.1	76.1	69.2	6.94	10.964		
1,700.0	1,700.0	1,696.9	1,696.8	3.7	3.6	-92.34	-3.2	-79.0	79.1	71.8	7.34	10.773		
1,800.0	1,800.0	1,795.0	1,794.7	3.9	3.8	92.53	-7.3	-83.8	84.4	76.6	7.72	10.921		
1,900.0	1,899.9	1,892.9	1,892.2	4.1	4.0	91.59	-13.0	-90.6	91.8	83.7	8.08	11.357		
2,000.0	1,999.7	1,990.4	1,989.1	4.3	4.2	91.39	-20.2	-99.2	101.5	93.0	8.46	11.992		
2,100.0	2,099.3	2,087.5	2,085.2	4.4	4.5	91.75	-29.0	-109.6	113.2	104.4	8.86	12.786		
2,200.0	2,198.6	2,184.0	2,180.4	4.6	4.7	92.48	-39.3	-121.8	127.2	117.9	9.28	13.704		
2,300.0	2,297.5	2,280.0	2,274.6	4.9	5.0	93.43	-51.1	-135.8	143.2	133.5	9.74	14.712		
2,400.0	2,396.2	2,375.3	2,367.6	5.1	5.3	94.43	-64.3	-151.5	161.4	151.2	10.23	15.777		
2,500.0	2,494.9	2,473.0	2,462.8	5.4	5.7	95.04	-78.7	-168.7	180.8	170.1	10.77	16.791		
2,600.0	2,593.5	2,571.1	2,558.3	5.7	6.1	95.53	-93.2	-185.9	200.2	188.9	11.33	17.670		
2,700.0	2,692.2	2,669.2	2,653.7	5.9	6.5	95.93	-107.7	-203.1	219.7	207.7	11.92	18.429		
2,800.0	2,790.9	2,767.3	2,749.2	6.2	6.9	96.27	-122.2	-220.4	239.1	226.6	12.53	19.086		
2,900.0	2,889.5	2,865.4	2,844.6	6.6	7.3	96.55	-136.7	-237.6	258.5	245.4	13.15	19.655		
3,000.0	2,988.2	2,963.5	2,940.1	6.9	7.7	96.80	-151.3	-254.8	278.0	264.2	13.80	20.151		
3,100.0	3,086.8	3,061.6	3,035.6	7.2	8.1	97.01	-165.8	-272.0	297.4	283.0	14.45	20.583		
3,200.0	3,185.5	3,159.6	3,131.0	7.5	8.6	97.20	-180.3	-289.3	316.9	301.8	15.12	20.962		
3,300.0	3,284.2	3,257.7	3,226.5	7.9	9.0	97.37	-194.8	-306.5	336.3	320.5	15.79	21.294		
3,400.0	3,382.8	3,355.8	3,322.0	8.2	9.5	97.52	-209.3	-323.7	355.8	339.3	16.48	21.588		
3,500.0	3,481.5	3,453.9	3,417.4	8.6	9.9	97.65	-223.8	-341.0	375.3	358.1	17.18	21.849		
3,600.0	3,580.1	3,552.0	3,512.9	8.9	10.4	97.77	-238.3	-358.2	394.7	376.8	17.88	22.080		
3,700.0	3,678.8	3,650.1	3,608.4	9.3	10.9	97.88	-252.8	-375.4	414.2	395.6	18.58	22.287		
3,800.0	3,777.5	3,748.1	3,703.8	9.6	11.3	97.97	-267.3	-392.7	433.6	414.3	19.30	22.472		
3,900.0	3,876.1	3,846.2	3,799.3	10.0	11.8	98.06	-281.8	-409.9	453.1	433.1	20.02	22.638		
4,000.0	3,974.8	3,944.3	3,894.7	10.3	12.3	98.15	-296.3	-427.1	472.6	451.8	20.74	22.788		
4,100.0	4,073.5	4,042.4	3,990.2	10.7	12.7	98.22	-310.8	-444.4	492.0	470.6	21.46	22.924		
4,200.0	4,172.1	4,140.5	4,085.7	11.1	13.2	98.29	-325.3	-461.6	511.5	489.3	22.19	23.047		
4,300.0	4,270.8	4,238.6	4,181.1	11.4	13.7	98.36	-339.8	-478.8	531.0	508.0	22.93	23.159		
4,400.0	4,369.4	4,336.7	4,276.6	11.8	14.2	98.42	-354.4	-496.1	550.4	526.8	23.66	23.261		
4,500.0	4,468.1	4,434.7	4,372.1	12.2	14.7	98.48	-368.9	-513.3	569.9	545.5	24.40	23.354		
4,600.0	4,566.8	4,532.8	4,467.5	12.5	15.1	98.53	-383.4	-530.5	589.4	564.2	25.14	23.440		
4,700.0	4,665.4	4,630.9	4,563.0	12.9	15.6	98.58	-397.9	-547.8	608.9	583.0	25.89	23.518		
4,800.0	4,764.1	4,729.0	4,658.5	13.3	16.1	98.62	-412.4	-565.0	628.3	601.7	26.63	23.591		
4,900.0	4,862.7	4,827.1	4,753.9	13.6	16.6	98.67	-426.9	-582.2	647.8	620.4	27.38	23.658		
5,000.0	4,961.4	4,925.2	4,849.4	14.0	17.1	98.71	-441.4	-599.4	667.3	639.1	28.13	23.719		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,060.1	5,023.3	4,944.8	14.4	17.5	98.75	-455.9	-616.7	686.7	657.9	28.88	23.777		
5,200.0	5,158.7	5,121.3	5,040.3	14.8	18.0	98.78	-470.4	-633.9	706.2	676.6	29.64	23.830		
5,300.0	5,257.4	5,219.4	5,135.8	15.1	18.5	98.82	-484.9	-651.1	725.7	695.3	30.39	23.879		
5,400.0	5,356.1	5,317.5	5,231.2	15.5	19.0	98.85	-499.4	-668.4	745.2	714.0	31.14	23.926		
5,500.0	5,454.7	5,415.6	5,326.7	15.9	19.5	98.88	-513.9	-685.6	764.6	732.7	31.90	23.969		
5,600.0	5,553.4	5,513.7	5,422.2	16.3	20.0	98.91	-528.4	-702.8	784.1	751.4	32.66	24.009		
5,700.0	5,652.0	5,611.8	5,517.6	16.7	20.5	98.94	-542.9	-720.1	803.6	770.2	33.42	24.047		
5,800.0	5,750.7	5,709.8	5,613.1	17.0	20.9	98.97	-557.5	-737.3	823.0	788.9	34.18	24.082		
5,900.0	5,849.4	5,807.9	5,708.6	17.4	21.4	99.05	-572.0	-754.5	842.5	807.6	34.94	24.114		
6,000.0	5,948.4	5,906.1	5,804.1	17.7	21.9	99.31	-586.5	-771.8	861.6	826.0	35.63	24.185		
6,100.0	6,047.8	6,004.2	5,899.6	17.9	22.4	99.33	-601.0	-789.0	880.2	843.9	36.26	24.275		
6,200.0	6,147.6	6,102.1	5,994.9	18.1	22.9	99.13	-615.5	-806.2	898.3	861.5	36.83	24.388		
6,300.0	6,247.5	6,215.3	6,105.2	18.3	23.4	98.63	-631.8	-825.6	915.5	878.2	37.34	24.515		
6,400.0	6,347.5	6,345.1	6,232.7	18.4	23.8	-88.90	-647.3	-844.0	929.5	892.1	37.47	24.808		
6,500.0	6,447.5	6,476.8	6,363.1	18.6	24.2	-89.64	-659.2	-858.1	940.2	902.4	37.80	24.871		
6,600.0	6,547.5	6,609.9	6,495.6	18.7	24.4	-90.14	-667.3	-867.7	947.5	909.3	38.14	24.844		
6,700.0	6,647.5	6,743.9	6,629.5	18.9	24.7	-90.39	-671.4	-872.6	951.1	912.7	38.46	24.731		
6,800.0	6,747.5	6,862.0	6,747.5	19.0	24.8	-90.42	-672.0	-873.3	951.6	912.9	38.77	24.544		
6,900.0	6,847.5	6,962.0	6,847.5	19.1	24.9	-90.42	-672.0	-873.3	951.6	912.6	39.06	24.363		
7,000.0	6,947.5	7,064.8	6,950.3	19.3	25.0	-90.29	-669.9	-873.2	951.6	912.2	39.35	24.182		
7,100.0	7,047.4	7,168.4	7,052.7	19.4	25.0	-91.41	-654.6	-872.7	951.1	911.3	39.86	23.864		
7,200.0	7,146.4	7,269.7	7,149.6	19.4	24.9	-90.52	-625.5	-871.8	950.9	911.0	39.88	23.845		
7,263.5	7,207.8	7,332.8	7,207.5	19.4	24.8	-89.96	-600.6	-870.9	950.8	911.1	39.77	23.911		
7,300.0	7,242.3	7,368.8	7,239.5	19.4	24.7	-89.63	-584.2	-870.4	950.8	911.2	39.68	23.961		
7,400.0	7,333.5	7,465.9	7,321.3	19.2	24.5	-88.76	-532.0	-868.6	951.0	911.7	39.31	24.190		
7,500.0	7,418.1	7,561.2	7,394.0	18.9	24.2	-87.91	-470.4	-866.5	951.4	912.6	38.83	24.502		
7,600.0	7,494.5	7,654.8	7,456.8	18.7	23.9	-87.11	-401.1	-864.2	952.0	913.7	38.30	24.856		
7,700.0	7,561.2	7,747.1	7,509.3	18.4	23.5	-86.37	-325.4	-861.7	952.7	914.9	37.81	25.200		
7,800.0	7,616.9	7,838.0	7,551.2	18.2	23.2	-85.70	-244.8	-859.0	953.5	916.0	37.43	25.472		
7,900.0	7,660.5	7,927.9	7,582.2	18.2	22.9	-85.10	-160.6	-856.1	954.2	917.0	37.26	25.610		
8,000.0	7,691.1	8,016.8	7,602.2	18.2	22.6	-84.60	-74.0	-853.2	955.0	917.6	37.35	25.566		
8,100.0	7,708.3	8,105.1	7,611.4	18.5	22.3	-84.18	13.6	-850.3	955.6	917.9	37.75	25.314		
8,200.0	7,712.0	8,200.4	7,611.7	18.9	22.1	-83.98	108.9	-847.1	955.9	917.4	38.51	24.822		
8,300.0	7,712.0	8,300.4	7,611.3	19.5	21.9	-83.95	208.9	-843.7	955.9	916.6	39.38	24.276		
8,400.0	7,712.0	8,400.4	7,610.9	20.3	22.1	-83.93	308.8	-840.4	956.0	915.6	40.32	23.709		
8,500.0	7,712.0	8,500.4	7,610.5	21.0	22.6	-83.90	408.8	-837.0	956.0	914.5	41.44	23.071		
8,600.0	7,712.0	8,600.4	7,610.1	21.9	23.3	-83.88	508.7	-833.6	956.0	913.1	42.87	22.302		
8,700.0	7,712.0	8,700.4	7,609.7	23.1	24.1	-83.85	608.6	-830.3	956.0	911.3	44.73	21.373		
8,800.0	7,712.0	8,800.4	7,609.2	24.3	25.1	-83.83	708.6	-826.9	956.0	909.2	46.84	20.409		
8,900.0	7,712.0	8,900.4	7,608.8	25.6	26.1	-83.80	808.5	-823.6	956.1	906.9	49.18	19.442		
9,000.0	7,712.0	9,000.4	7,608.4	27.0	27.2	-83.78	908.5	-820.2	956.1	904.4	51.70	18.494		
9,100.0	7,712.0	9,100.4	7,608.0	28.5	28.5	-83.75	1,008.4	-816.8	956.1	901.7	54.38	17.582		
9,200.0	7,712.0	9,200.4	7,607.6	30.0	29.7	-83.73	1,108.3	-813.5	956.1	898.9	57.20	16.714		
9,300.0	7,712.0	9,300.4	7,607.1	31.6	31.1	-83.70	1,208.3	-810.1	956.2	896.0	60.15	15.897		
9,400.0	7,712.0	9,400.4	7,606.7	33.2	32.5	-83.68	1,308.2	-806.8	956.2	893.0	63.20	15.130		
9,500.0	7,712.0	9,500.4	7,606.3	34.8	34.0	-83.65	1,408.2	-803.4	956.2	889.9	66.34	14.415		
9,600.0	7,712.0	9,600.4	7,605.9	36.4	35.5	-83.63	1,508.1	-800.1	956.2	886.7	69.55	13.748		
9,700.0	7,712.0	9,700.4	7,605.5	38.1	37.0	-83.60	1,608.1	-796.7	956.2	883.4	72.83	13.129		
9,800.0	7,712.0	9,800.4	7,605.1	39.8	38.6	-83.58	1,708.0	-793.4	956.3	880.1	76.17	12.554		
9,900.0	7,712.0	9,900.4	7,604.6	41.5	40.2	-83.55	1,807.9	-790.0	956.3	876.7	79.57	12.019		
10,000.0	7,712.0	10,000.4	7,604.2	43.3	41.9	-83.53	1,907.9	-786.6	956.3	873.3	83.00	11.522		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 214 - 2920H - Wellbore #1 - Plan #1													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	7,712.0	10,100.4	7,603.8	45.0	43.6	-83.50	2,007.8	-783.3	956.3	869.9	86.48	11.059	
10,200.0	7,712.0	10,200.4	7,603.4	46.8	45.3	-83.48	2,107.8	-779.9	956.4	866.4	89.99	10.628	
10,300.0	7,712.0	10,300.4	7,603.0	48.6	47.0	-83.45	2,207.7	-776.6	956.4	862.9	93.53	10.226	
10,400.0	7,712.0	10,400.4	7,602.6	50.4	48.7	-83.43	2,307.6	-773.2	956.4	859.3	97.09	9.850	
10,500.0	7,712.0	10,500.4	7,602.1	52.2	50.5	-83.40	2,407.6	-769.9	956.4	855.8	100.68	9.499	
10,600.0	7,712.0	10,600.4	7,601.7	54.0	52.3	-83.38	2,507.5	-766.5	956.5	852.2	104.30	9.171	
10,700.0	7,712.0	10,700.4	7,601.3	55.8	54.1	-83.36	2,607.5	-763.2	956.5	848.6	107.93	8.862	
10,800.0	7,712.0	10,800.4	7,600.9	57.6	55.9	-83.33	2,707.4	-759.8	956.5	844.9	111.58	8.573	
10,900.0	7,712.0	10,900.4	7,600.5	59.4	57.7	-83.31	2,807.3	-756.4	956.5	841.3	115.24	8.300	
11,000.0	7,712.0	11,000.4	7,600.1	61.3	59.5	-83.28	2,907.3	-753.1	956.6	837.6	118.92	8.044	
11,100.0	7,712.0	11,100.4	7,599.7	63.1	61.4	-83.26	3,007.2	-749.7	956.6	834.0	122.62	7.802	
11,200.0	7,712.0	11,200.4	7,599.2	64.9	63.2	-83.23	3,107.2	-746.4	956.6	830.3	126.32	7.573	
11,300.0	7,712.0	11,300.4	7,598.8	66.8	65.1	-83.21	3,207.1	-743.0	956.7	826.6	130.03	7.357	
11,400.0	7,712.0	11,400.4	7,598.4	68.6	67.0	-83.18	3,307.0	-739.7	956.7	822.9	133.76	7.152	
11,500.0	7,712.0	11,500.4	7,598.0	70.5	68.8	-83.16	3,407.0	-736.3	956.7	819.2	137.49	6.958	
11,600.0	7,712.0	11,600.3	7,597.6	72.3	70.7	-83.13	3,506.9	-733.0	956.7	815.5	141.23	6.774	
11,700.0	7,712.0	11,700.3	7,597.2	74.2	72.6	-83.11	3,606.9	-729.6	956.8	811.8	144.98	6.599	
11,800.0	7,712.0	11,800.3	7,596.8	76.1	74.5	-83.08	3,706.8	-726.3	956.8	808.1	148.74	6.433	
11,900.0	7,712.0	11,900.3	7,596.3	77.9	76.4	-83.06	3,806.7	-722.9	956.8	804.3	152.50	6.274	
12,000.0	7,712.0	12,000.3	7,595.9	79.8	78.3	-83.03	3,906.7	-719.6	956.9	800.6	156.27	6.123	
12,100.0	7,712.0	12,100.3	7,595.5	81.7	80.2	-83.01	4,006.6	-716.2	956.9	796.8	160.04	5.979	
12,200.0	7,712.0	12,200.3	7,595.1	83.5	82.1	-82.98	4,106.6	-712.9	956.9	793.1	163.82	5.841	
12,300.0	7,712.0	12,300.3	7,594.7	85.4	84.0	-82.96	4,206.5	-709.5	956.9	789.3	167.60	5.710	
12,400.0	7,712.0	12,400.3	7,594.3	87.3	86.0	-82.93	4,306.4	-706.1	957.0	785.6	171.39	5.584	
12,500.0	7,712.0	12,500.3	7,593.9	89.2	87.9	-82.91	4,406.4	-702.8	957.0	781.8	175.18	5.463	
12,600.0	7,712.0	12,600.3	7,593.5	91.1	89.8	-82.88	4,506.3	-699.4	957.0	778.1	178.98	5.347	
12,700.0	7,712.0	12,700.3	7,593.0	92.9	91.7	-82.86	4,606.3	-696.1	957.1	774.3	182.77	5.236	
12,800.0	7,712.0	12,800.3	7,592.6	94.8	93.7	-82.84	4,706.2	-692.7	957.1	770.5	186.58	5.130	
12,900.0	7,712.0	12,900.3	7,592.2	96.7	95.6	-82.81	4,806.2	-689.4	957.1	766.8	190.38	5.027	
13,000.0	7,712.0	13,000.3	7,591.8	98.6	97.5	-82.79	4,906.1	-686.0	957.2	763.0	194.19	4.929	
13,100.0	7,712.0	13,100.3	7,591.4	100.5	99.5	-82.76	5,006.0	-682.7	957.2	759.2	198.00	4.834	
13,200.0	7,712.0	13,200.3	7,591.0	102.4	101.4	-82.74	5,106.0	-679.3	957.2	755.4	201.81	4.743	
13,300.0	7,712.0	13,300.3	7,590.6	104.3	103.4	-82.71	5,205.9	-676.0	957.3	751.6	205.62	4.655	
13,400.0	7,712.0	13,400.3	7,590.2	106.1	105.3	-82.69	5,305.9	-672.6	957.3	747.9	209.44	4.571	
13,500.0	7,712.0	13,500.3	7,589.8	108.0	107.3	-82.66	5,405.8	-669.3	957.3	744.1	213.26	4.489	
13,600.0	7,712.0	13,600.3	7,589.3	109.9	109.2	-82.64	5,505.7	-665.9	957.4	740.3	217.08	4.410	
13,700.0	7,712.0	13,700.3	7,588.9	111.8	111.2	-82.61	5,605.7	-662.6	957.4	736.5	220.90	4.334	
13,800.0	7,712.0	13,800.3	7,588.5	113.7	113.1	-82.59	5,705.6	-659.2	957.4	732.7	224.73	4.260	
13,900.0	7,712.0	13,900.3	7,588.1	115.6	115.1	-82.57	5,805.6	-655.9	957.5	728.9	228.55	4.189	
14,000.0	7,712.0	14,000.3	7,587.7	117.5	117.0	-82.54	5,905.5	-652.5	957.5	725.1	232.38	4.120	
14,100.0	7,712.0	14,100.3	7,587.3	119.4	119.0	-82.52	6,005.4	-649.2	957.5	721.3	236.21	4.054	
14,200.0	7,712.0	14,200.3	7,586.9	121.3	120.9	-82.49	6,105.4	-645.8	957.6	717.5	240.04	3.989	
14,300.0	7,712.0	14,300.3	7,586.5	123.2	122.9	-82.47	6,205.3	-642.5	957.6	713.7	243.87	3.927	
14,400.0	7,712.0	14,400.3	7,586.1	125.1	124.9	-82.44	6,305.3	-639.1	957.6	709.9	247.70	3.866	
14,500.0	7,712.0	14,500.3	7,585.6	127.0	126.8	-82.42	6,405.2	-635.8	957.7	706.1	251.53	3.807	
14,600.0	7,712.0	14,600.3	7,585.2	128.9	128.8	-82.39	6,505.1	-632.4	957.7	702.4	255.37	3.750	
14,700.0	7,712.0	14,700.3	7,584.8	130.8	130.8	-82.37	6,605.1	-629.1	957.8	698.6	259.20	3.695	
14,800.0	7,712.0	14,800.3	7,584.4	132.7	132.7	-82.35	6,705.0	-625.8	957.8	694.8	263.04	3.641	
14,900.0	7,712.0	14,900.3	7,584.0	134.6	134.7	-82.32	6,805.0	-622.4	957.8	691.0	266.87	3.589	
15,000.0	7,712.0	15,000.3	7,583.6	136.5	136.7	-82.30	6,904.9	-619.1	957.9	687.2	270.71	3.538	
15,100.0	7,712.0	15,100.3	7,583.2	138.4	138.6	-82.27	7,004.9	-615.7	957.9	683.4	274.55	3.489	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,200.0	7,712.0	15,200.3	7,582.8	140.3	140.6	-82.25	7,104.8	-612.4	957.9	679.6	278.39	3.441		
15,300.0	7,712.0	15,300.3	7,582.4	142.2	142.6	-82.22	7,204.7	-609.0	958.0	675.8	282.23	3.394		
15,400.0	7,712.0	15,400.3	7,582.0	144.1	144.5	-82.20	7,304.7	-605.7	958.0	672.0	286.07	3.349		
15,500.0	7,712.0	15,500.3	7,581.6	146.0	146.5	-82.17	7,404.6	-602.3	958.1	668.2	289.91	3.305		
15,600.0	7,712.0	15,600.3	7,581.2	147.9	148.5	-82.15	7,504.6	-599.0	958.1	664.4	293.75	3.262		
15,700.0	7,712.0	15,700.3	7,580.7	149.8	150.5	-82.13	7,604.5	-595.6	958.1	660.6	297.59	3.220		
15,800.0	7,712.0	15,800.3	7,580.3	151.7	152.4	-82.10	7,704.4	-592.3	958.2	656.7	301.43	3.179		
15,900.0	7,712.0	15,900.3	7,579.9	153.6	154.4	-82.08	7,804.4	-588.9	958.2	652.9	305.27	3.139		
16,000.0	7,712.0	16,000.3	7,579.5	155.5	156.4	-82.05	7,904.3	-585.6	958.3	649.1	309.11	3.100		
16,100.0	7,712.0	16,100.2	7,579.1	157.5	158.4	-82.03	8,004.3	-582.2	958.3	645.3	312.96	3.062		
16,200.0	7,712.0	16,200.2	7,578.7	159.4	160.3	-82.00	8,104.2	-578.9	958.3	641.5	316.80	3.025		
16,300.0	7,712.0	16,300.2	7,578.3	161.3	162.3	-81.98	8,204.1	-575.5	958.4	637.7	320.64	2.989		
16,400.0	7,712.0	16,400.2	7,577.9	163.2	164.3	-81.96	8,304.1	-572.2	958.4	633.9	324.49	2.954		
16,500.0	7,712.0	16,500.2	7,577.5	165.1	166.3	-81.93	8,404.0	-568.9	958.5	630.1	328.33	2.919		
16,600.0	7,712.0	16,600.2	7,577.1	167.0	168.3	-81.91	8,504.0	-565.5	958.5	626.3	332.17	2.886		
16,700.0	7,712.0	16,700.2	7,576.7	168.9	170.2	-81.88	8,603.9	-562.2	958.6	622.5	336.02	2.853		
16,800.0	7,712.0	16,800.2	7,576.3	170.8	172.2	-81.86	8,703.8	-558.8	958.6	618.7	339.86	2.821		
16,900.0	7,712.0	16,900.2	7,575.9	172.7	174.2	-81.84	8,803.8	-555.5	958.6	614.9	343.70	2.789		
17,000.0	7,712.0	17,000.2	7,575.5	174.6	176.2	-81.81	8,903.7	-552.1	958.7	611.1	347.55	2.758		
17,100.0	7,712.0	17,100.2	7,575.0	176.5	178.2	-81.79	9,003.7	-548.8	958.7	607.3	351.39	2.728		
17,200.0	7,712.0	17,200.2	7,574.6	178.4	180.1	-81.76	9,103.6	-545.4	958.8	603.5	355.24	2.699		
17,300.0	7,712.0	17,300.2	7,574.2	180.4	182.1	-81.74	9,203.6	-542.1	958.8	599.7	359.08	2.670		
17,400.0	7,712.0	17,400.2	7,573.8	182.3	184.1	-81.72	9,303.5	-538.8	958.9	595.9	362.92	2.642		
17,500.0	7,712.0	17,500.2	7,573.4	184.2	186.1	-81.69	9,403.4	-535.4	958.9	592.1	366.77	2.614		
17,600.0	7,712.0	17,600.2	7,573.0	186.1	188.1	-81.67	9,503.4	-532.1	958.9	588.3	370.61	2.587		
17,700.0	7,712.0	17,700.2	7,572.6	188.0	190.1	-81.64	9,603.3	-528.7	959.0	584.5	374.46	2.561		
17,800.0	7,712.0	17,800.2	7,572.2	189.9	192.0	-81.62	9,703.3	-525.4	959.0	580.7	378.30	2.535		
17,832.2	7,712.0	17,832.4	7,572.1	190.5	192.6	-81.61	9,735.5	-524.3	959.0	579.6	379.46	2.527		
17,882.4	7,712.0	17,852.5	7,572.0	191.5	192.9	-81.61	9,755.5	-523.6	959.5	578.8	380.75	2.520 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3)											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-25.1	25.1						
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-25.1	25.1	24.9	0.22	111.800			
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-25.1	25.1	24.5	0.67	37.267			
300.0	300.0	300.0	300.0	0.6	0.6	-89.96	0.0	-25.1	25.1	24.0	1.12	22.360			
400.0	400.0	400.0	400.0	0.8	0.8	-89.96	0.0	-25.1	25.1	23.6	1.57	15.971			
500.0	500.0	500.0	500.0	1.0	1.0	-89.96	0.0	-25.1	25.1	23.1	2.02	12.422			
600.0	600.0	600.0	600.0	1.2	1.2	-89.96	0.0	-25.1	25.1	22.7	2.47	10.164			
700.0	700.0	700.0	700.0	1.5	1.5	-89.96	0.0	-25.1	25.1	22.2	2.92	8.600			
800.0	800.0	800.0	800.0	1.7	1.7	-89.96	0.0	-25.1	25.1	21.8	3.37	7.453			
900.0	900.0	900.0	900.0	1.9	1.9	-89.96	0.0	-25.1	25.1	21.3	3.82	6.576			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.96	0.0	-25.1	25.1	20.9	4.27	5.884			
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.96	0.0	-25.1	25.1	20.4	4.72	5.324			
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.96	0.0	-25.1	25.1	20.0	5.17	4.861			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.96	0.0	-25.1	25.1	19.5	5.62	4.472			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.96	0.0	-25.1	25.1	19.1	6.07	4.141			
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.96	0.0	-25.1	25.1	18.6	6.52	3.855			
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.96	0.0	-25.1	25.1	18.2	6.97	3.606			
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.96	0.0	-25.1	25.1	17.7	7.42	3.388	CC		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	99.70	0.0	-25.1	25.3	17.5	7.84	3.230			
1,900.0	1,899.9	1,899.9	1,899.9	4.1	4.2	108.15	0.0	-25.1	26.3	18.0	8.23	3.191			
2,000.0	1,999.7	1,999.8	1,999.8	4.3	4.4	117.93	-1.2	-25.5	28.8	20.2	8.60	3.353			
2,100.0	2,099.3	2,099.7	2,099.6	4.4	4.5	125.15	-5.0	-26.6	33.1	24.1	8.95	3.695			
2,200.0	2,198.6	2,199.8	2,199.5	4.6	4.7	129.90	-11.3	-28.5	38.6	29.3	9.31	4.148			
2,300.0	2,297.5	2,299.9	2,299.1	4.9	4.9	132.72	-20.0	-31.0	45.3	35.6	9.69	4.671			
2,400.0	2,396.2	2,400.1	2,398.6	5.1	5.1	133.65	-31.3	-34.4	52.4	42.3	10.11	5.181			
2,500.0	2,494.9	2,500.3	2,497.9	5.4	5.3	132.04	-45.1	-38.4	58.6	48.1	10.57	5.548			
2,600.0	2,593.5	2,600.4	2,596.5	5.7	5.6	128.74	-61.1	-43.2	64.2	53.2	11.07	5.802			
2,700.0	2,692.2	2,700.2	2,694.8	5.9	5.8	125.67	-77.5	-48.0	69.9	58.3	11.61	6.023			
2,800.0	2,790.9	2,799.9	2,793.1	6.2	6.1	123.06	-93.8	-52.8	75.8	63.6	12.18	6.224			
2,900.0	2,889.5	2,899.7	2,891.5	6.6	6.4	120.84	-110.2	-57.6	81.8	69.0	12.77	6.405			
3,000.0	2,988.2	2,999.5	2,989.8	6.9	6.7	118.92	-126.5	-62.4	87.9	74.5	13.39	6.568			
3,100.0	3,086.8	3,099.3	3,088.1	7.2	7.0	117.25	-142.8	-67.3	94.1	80.1	14.02	6.713			
3,200.0	3,185.5	3,199.0	3,186.4	7.5	7.3	115.79	-159.2	-72.1	100.4	85.7	14.67	6.844			
3,300.0	3,284.2	3,298.8	3,284.7	7.9	7.6	114.50	-175.5	-76.9	106.7	91.4	15.33	6.962			
3,400.0	3,382.8	3,398.6	3,383.0	8.2	8.0	113.36	-191.9	-81.7	113.1	97.1	16.00	7.067			
3,500.0	3,481.5	3,498.4	3,481.3	8.6	8.3	112.34	-208.2	-86.5	119.5	102.8	16.68	7.163			
3,600.0	3,580.1	3,598.1	3,579.6	8.9	8.6	111.42	-224.5	-91.4	125.9	108.6	17.37	7.249			
3,700.0	3,678.8	3,697.9	3,677.9	9.3	9.0	110.59	-240.9	-96.2	132.4	114.3	18.07	7.327			
3,800.0	3,777.5	3,797.7	3,776.2	9.6	9.3	109.84	-257.2	-101.0	138.9	120.1	18.78	7.398			
3,900.0	3,876.1	3,897.4	3,874.5	10.0	9.7	109.16	-273.6	-105.8	145.4	125.9	19.49	7.463			
4,000.0	3,974.8	3,997.2	3,972.8	10.3	10.1	108.53	-289.9	-110.6	152.0	131.8	20.20	7.522			
4,100.0	4,073.5	4,097.0	4,071.1	10.7	10.4	107.96	-306.2	-115.5	158.5	137.6	20.92	7.576			
4,200.0	4,172.1	4,196.8	4,169.5	11.1	10.8	107.43	-322.6	-120.3	165.1	143.4	21.65	7.626			
4,300.0	4,270.8	4,296.5	4,267.8	11.4	11.2	106.95	-338.9	-125.1	171.7	149.3	22.38	7.672			
4,400.0	4,369.4	4,396.3	4,366.1	11.8	11.5	106.50	-355.3	-129.9	178.3	155.2	23.11	7.714			
4,500.0	4,468.1	4,496.1	4,464.4	12.2	11.9	106.08	-371.6	-134.7	184.9	161.0	23.84	7.754			
4,600.0	4,566.8	4,595.9	4,562.7	12.5	12.3	105.69	-387.9	-139.5	191.5	166.9	24.58	7.790			
4,700.0	4,665.4	4,695.6	4,661.0	12.9	12.6	105.32	-404.3	-144.4	198.1	172.8	25.32	7.824			
4,800.0	4,764.1	4,795.4	4,759.3	13.3	13.0	104.98	-420.6	-149.2	204.7	178.7	26.06	7.856			
4,900.0	4,862.7	4,895.2	4,857.6	13.6	13.4	104.66	-437.0	-154.0	211.4	184.6	26.81	7.885			
5,000.0	4,961.4	4,994.9	4,955.9	14.0	13.8	104.36	-453.3	-158.8	218.0	190.5	27.55	7.913			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,060.1	5,094.7	5,054.2	14.4	14.2	104.08	-469.6	-163.6	224.7	196.4	28.30	7.939		
5,200.0	5,158.7	5,194.5	5,152.5	14.8	14.5	103.82	-486.0	-168.5	231.3	202.3	29.05	7.963		
5,300.0	5,257.4	5,294.3	5,250.8	15.1	14.9	103.57	-502.3	-173.3	238.0	208.2	29.80	7.986		
5,400.0	5,356.1	5,394.0	5,349.1	15.5	15.3	103.33	-518.7	-178.1	244.6	214.1	30.55	8.007		
5,500.0	5,454.7	5,493.8	5,447.5	15.9	15.7	103.10	-535.0	-182.9	251.3	220.0	31.31	8.027		
5,600.0	5,553.4	5,593.6	5,545.8	16.3	16.1	102.89	-551.3	-187.7	258.0	225.9	32.06	8.046		
5,700.0	5,652.0	5,693.4	5,644.1	16.7	16.5	102.69	-567.7	-192.6	264.7	231.8	32.82	8.065		
5,800.0	5,750.7	5,793.1	5,742.4	17.0	16.8	102.50	-584.0	-197.4	271.3	237.8	33.57	8.082		
5,900.0	5,849.4	5,892.9	5,840.7	17.4	17.2	102.33	-600.3	-202.2	278.0	243.7	34.32	8.099		
6,000.0	5,948.4	5,992.7	5,939.0	17.7	17.6	101.81	-616.7	-207.0	284.2	249.2	34.98	8.126		
6,100.0	6,047.8	6,092.9	6,037.8	17.9	18.0	100.66	-633.0	-211.8	289.7	254.2	35.58	8.144		
6,200.0	6,147.6	6,194.9	6,138.7	18.1	18.3	99.33	-647.0	-216.0	294.2	258.2	36.05	8.163		
6,300.0	6,247.5	6,297.2	6,240.4	18.3	18.5	98.01	-657.7	-219.1	297.5	261.1	36.44	8.164		
6,400.0	6,347.5	6,399.9	6,342.8	18.4	18.7	-89.97	-664.8	-221.2	299.5	262.8	36.72	8.157		
6,500.0	6,447.5	6,503.0	6,445.8	18.6	18.9	-90.67	-668.5	-222.3	300.6	263.6	37.02	8.121		
6,600.0	6,547.5	6,604.7	6,547.5	18.7	19.1	-90.76	-669.0	-222.4	300.8	263.4	37.31	8.060		
6,700.0	6,647.5	6,704.7	6,647.5	18.9	19.2	-90.76	-669.0	-222.4	300.8	263.2	37.60	7.999		
6,800.0	6,747.5	6,804.7	6,747.5	19.0	19.3	-90.76	-669.0	-222.4	300.8	262.9	37.89	7.938		
6,900.0	6,847.5	6,904.7	6,847.5	19.1	19.5	-90.76	-669.0	-222.4	300.8	262.6	38.18	7.878		
7,000.0	6,947.5	7,005.6	6,948.4	19.3	19.6	-90.41	-667.1	-222.4	300.7	262.2	38.47	7.816		
7,099.0	7,046.4	7,105.1	7,046.8	19.4	19.6	-90.32	-653.1	-221.9	300.4	261.7	38.71	7.761		
7,100.0	7,047.4	7,105.7	7,047.4	19.4	19.6	-89.97	-653.0	-221.9	300.4	261.7	38.72	7.759		
7,200.0	7,146.4	7,203.8	7,141.6	19.4	19.5	-87.37	-625.9	-221.0	300.8	262.1	38.67	7.778		
7,300.0	7,242.3	7,300.0	7,229.5	19.4	19.4	-84.84	-587.1	-219.7	301.7	263.3	38.38	7.861		
7,400.0	7,333.5	7,394.8	7,310.3	19.2	19.1	-82.44	-537.7	-218.1	303.1	265.2	37.89	8.001		
7,500.0	7,418.1	7,488.0	7,382.8	18.9	18.9	-80.22	-479.1	-216.1	304.9	267.7	37.25	8.186		
7,600.0	7,494.5	7,580.0	7,446.1	18.7	18.6	-78.20	-412.5	-213.9	307.0	270.5	36.54	8.401		
7,700.0	7,561.2	7,670.9	7,499.9	18.4	18.4	-76.43	-339.3	-211.5	309.2	273.3	35.86	8.622		
7,800.0	7,616.9	7,760.9	7,543.5	18.2	18.2	-74.91	-260.8	-208.9	311.3	276.0	35.29	8.820		
7,900.0	7,660.5	7,850.0	7,576.7	18.2	18.1	-73.67	-178.2	-206.1	313.2	278.2	34.95	8.961		
8,000.0	7,691.1	7,938.6	7,599.3	18.2	18.2	-72.71	-92.6	-203.3	314.7	279.8	34.93	9.012		
8,100.0	7,708.3	8,026.8	7,611.1	18.5	18.4	-72.05	-5.3	-200.4	315.9	280.6	35.28	8.954		
8,200.0	7,712.0	8,120.2	7,611.8	18.9	18.8	-71.57	87.0	-197.3	316.8	280.7	36.02	8.794		
8,300.0	7,712.0	8,220.2	7,611.4	19.5	19.3	-71.50	187.0	-194.0	316.9	279.8	37.12	8.538		
8,400.0	7,712.0	8,320.2	7,611.0	20.3	19.9	-71.43	286.9	-190.7	317.0	278.6	38.48	8.239		
8,500.0	7,712.0	8,420.2	7,610.6	21.0	20.7	-71.36	386.8	-187.3	317.2	277.2	39.99	7.932		
8,600.0	7,712.0	8,520.2	7,610.2	21.9	21.7	-71.30	486.8	-184.0	317.3	275.6	41.76	7.599		
8,700.0	7,712.0	8,620.2	7,609.8	23.1	22.8	-71.23	586.7	-180.7	317.5	273.6	43.90	7.231		
8,800.0	7,712.0	8,720.2	7,609.4	24.3	24.0	-71.16	686.7	-177.4	317.6	271.4	46.25	6.867		
8,900.0	7,712.0	8,820.2	7,609.0	25.6	25.3	-71.09	786.6	-174.0	317.7	269.0	48.76	6.516		
9,000.0	7,712.0	8,920.2	7,608.6	27.0	26.7	-71.02	886.6	-170.7	317.9	266.5	51.41	6.183		
9,100.0	7,712.0	9,020.2	7,608.2	28.5	28.2	-70.95	986.5	-167.4	318.0	263.8	54.19	5.869		
9,200.0	7,712.0	9,120.2	7,607.8	30.0	29.7	-70.89	1,086.5	-164.1	318.2	261.1	57.07	5.575		
9,300.0	7,712.0	9,220.2	7,607.4	31.6	31.2	-70.82	1,186.4	-160.7	318.3	258.3	60.04	5.302		
9,400.0	7,712.0	9,320.2	7,607.0	33.2	32.9	-70.75	1,286.3	-157.4	318.4	255.4	63.08	5.048		
9,500.0	7,712.0	9,420.2	7,606.6	34.8	34.5	-70.68	1,386.3	-154.1	318.6	252.4	66.18	4.814		
9,600.0	7,712.0	9,520.2	7,606.2	36.4	36.2	-70.61	1,486.2	-150.8	318.7	249.4	69.34	4.596		
9,700.0	7,712.0	9,620.2	7,605.8	38.1	37.9	-70.55	1,586.2	-147.4	318.9	246.3	72.55	4.395		
9,800.0	7,712.0	9,720.2	7,605.4	39.8	39.6	-70.48	1,686.1	-144.1	319.0	243.2	75.80	4.208		
9,900.0	7,712.0	9,820.2	7,605.0	41.5	41.4	-70.41	1,786.1	-140.8	319.1	240.0	79.08	4.035		
10,000.0	7,712.0	9,920.2	7,604.6	43.3	43.2	-70.34	1,886.0	-137.4	319.3	236.9	82.40	3.875		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,100.0	7,712.0	10,020.2	7,604.2	45.0	44.9	-70.27	1,986.0	-134.1	319.4	233.7	85.74	3.725		
10,200.0	7,712.0	10,120.2	7,603.8	46.8	46.8	-70.20	2,085.9	-130.8	319.5	230.4	89.11	3.586		
10,300.0	7,712.0	10,220.2	7,603.4	48.6	48.6	-70.14	2,185.8	-127.5	319.7	227.2	92.50	3.456		
10,400.0	7,712.0	10,320.2	7,603.0	50.4	50.4	-70.07	2,285.8	-124.1	319.8	223.9	95.90	3.335		
10,500.0	7,712.0	10,420.2	7,602.6	52.2	52.2	-70.00	2,385.7	-120.8	320.0	220.7	99.32	3.222		
10,600.0	7,712.0	10,520.2	7,602.2	54.0	54.1	-69.93	2,485.7	-117.5	320.1	217.4	102.76	3.115		
10,700.0	7,712.0	10,620.2	7,601.7	55.8	56.0	-69.86	2,585.6	-114.1	320.3	214.0	106.20	3.015		
10,800.0	7,712.0	10,720.2	7,601.3	57.6	57.8	-69.79	2,685.6	-110.8	320.4	210.7	109.66	2.922		
10,900.0	7,712.0	10,820.2	7,600.9	59.4	59.7	-69.73	2,785.5	-107.5	320.5	207.4	113.13	2.833		
11,000.0	7,712.0	10,920.2	7,600.5	61.3	61.6	-69.66	2,885.4	-104.1	320.7	204.1	116.60	2.750		
11,100.0	7,712.0	11,020.2	7,600.1	63.1	63.5	-69.59	2,985.4	-100.8	320.8	200.7	120.09	2.672		
11,200.0	7,712.0	11,120.2	7,599.7	64.9	65.3	-69.52	3,085.3	-97.5	321.0	197.4	123.58	2.597		
11,300.0	7,712.0	11,220.2	7,599.3	66.8	67.2	-69.45	3,185.3	-94.1	321.1	194.0	127.07	2.527		
11,400.0	7,712.0	11,320.2	7,598.9	68.6	69.1	-69.38	3,285.2	-90.8	321.2	190.7	130.58	2.460		
11,500.0	7,712.0	11,420.2	7,598.5	70.5	71.0	-69.32	3,385.2	-87.5	321.4	187.3	134.08	2.397		
11,600.0	7,712.0	11,520.2	7,598.1	72.3	73.0	-69.25	3,485.1	-84.1	321.5	183.9	137.59	2.337		
11,700.0	7,712.0	11,620.2	7,597.7	74.2	74.9	-69.18	3,585.1	-80.8	321.7	180.6	141.10	2.280		
11,800.0	7,712.0	11,720.2	7,597.3	76.1	76.8	-69.11	3,685.0	-77.5	321.8	177.2	144.62	2.225		
11,900.0	7,712.0	11,820.2	7,596.8	77.9	78.7	-69.04	3,784.9	-74.1	322.0	173.8	148.14	2.173		
12,000.0	7,712.0	11,920.2	7,596.4	79.8	80.6	-68.97	3,884.9	-70.8	322.1	170.4	151.66	2.124		
12,100.0	7,712.0	12,020.2	7,596.0	81.7	82.5	-68.91	3,984.8	-67.4	322.2	167.1	155.18	2.077		
12,200.0	7,712.0	12,120.2	7,595.6	83.5	84.5	-68.84	4,084.8	-64.1	322.4	163.7	158.70	2.031		
12,300.0	7,712.0	12,220.2	7,595.2	85.4	86.4	-68.77	4,184.7	-60.8	322.5	160.3	162.22	1.988		
12,400.0	7,712.0	12,320.2	7,594.8	87.3	88.3	-68.70	4,284.7	-57.4	322.7	156.9	165.75	1.947		
12,500.0	7,712.0	12,420.2	7,594.4	89.2	90.2	-68.63	4,384.6	-54.1	322.8	153.5	169.27	1.907		
12,600.0	7,712.0	12,520.2	7,594.0	91.1	92.2	-68.56	4,484.5	-50.8	322.9	150.2	172.80	1.869		
12,700.0	7,712.0	12,620.2	7,593.6	92.9	94.1	-68.50	4,584.5	-47.4	323.1	146.8	176.32	1.832		
12,800.0	7,712.0	12,720.2	7,593.2	94.8	96.1	-68.43	4,684.4	-44.1	323.2	143.4	179.85	1.797		
12,900.0	7,712.0	12,820.2	7,592.7	96.7	98.0	-68.36	4,784.4	-40.7	323.4	140.0	183.37	1.763		
13,000.0	7,712.0	12,920.2	7,592.3	98.6	99.9	-68.29	4,884.3	-37.4	323.5	136.6	186.90	1.731		
13,100.0	7,712.0	13,020.2	7,591.9	100.5	101.9	-68.22	4,984.3	-34.1	323.7	133.2	190.42	1.700		
13,200.0	7,712.0	13,120.2	7,591.5	102.4	103.8	-68.15	5,084.2	-30.7	323.8	129.9	193.95	1.670		
13,300.0	7,712.0	13,220.2	7,591.1	104.3	105.8	-68.09	5,184.1	-27.4	324.0	126.5	197.47	1.641		
13,400.0	7,712.0	13,320.2	7,590.7	106.1	107.7	-68.02	5,284.1	-24.0	324.1	123.1	200.99	1.613		
13,500.0	7,712.0	13,420.2	7,590.3	108.0	109.6	-67.95	5,384.0	-20.7	324.2	119.7	204.51	1.585		
13,600.0	7,712.0	13,520.2	7,589.9	109.9	111.6	-67.88	5,484.0	-17.3	324.4	116.4	208.03	1.559		
13,700.0	7,712.0	13,620.2	7,589.4	111.8	113.5	-67.81	5,583.9	-14.0	324.5	113.0	211.54	1.534		
13,800.0	7,712.0	13,720.2	7,589.0	113.7	115.5	-67.74	5,683.9	-10.7	324.7	109.6	215.06	1.510		
13,900.0	7,712.0	13,820.2	7,588.6	115.6	117.4	-67.67	5,783.8	-7.3	324.8	106.3	218.57	1.486 Level 3		
14,000.0	7,712.0	13,920.2	7,588.2	117.5	119.4	-67.61	5,883.7	-4.0	325.0	102.9	222.08	1.463 Level 3		
14,100.0	7,712.0	14,020.2	7,587.8	119.4	121.3	-67.54	5,983.7	-0.6	325.1	99.5	225.59	1.441 Level 3		
14,200.0	7,712.0	14,120.2	7,587.4	121.3	123.3	-67.47	6,083.6	2.7	325.3	96.2	229.10	1.420 Level 3		
14,300.0	7,712.0	14,220.2	7,587.0	123.2	125.2	-67.40	6,183.6	6.1	325.4	92.8	232.61	1.399 Level 3		
14,400.0	7,712.0	14,320.2	7,586.5	125.1	127.2	-67.33	6,283.5	9.4	325.5	89.4	236.11	1.379 Level 3		
14,500.0	7,712.0	14,420.2	7,586.1	127.0	129.2	-67.26	6,383.5	12.8	325.7	86.1	239.61	1.359 Level 3		
14,600.0	7,712.0	14,520.2	7,585.7	128.9	131.1	-67.20	6,483.4	16.1	325.8	82.7	243.11	1.340 Level 3		
14,700.0	7,712.0	14,620.2	7,585.3	130.8	133.1	-67.13	6,583.4	19.5	326.0	79.4	246.61	1.322 Level 3		
14,800.0	7,712.0	14,720.2	7,584.9	132.7	135.0	-67.06	6,683.3	22.8	326.1	76.0	250.11	1.304 Level 3		
14,900.0	7,712.0	14,820.2	7,584.5	134.6	137.0	-66.99	6,783.2	26.2	326.3	72.7	253.60	1.287 Level 3		
15,000.0	7,712.0	14,920.2	7,584.0	136.5	138.9	-66.92	6,883.2	29.5	326.4	69.3	257.09	1.270 Level 3		
15,100.0	7,712.0	15,020.2	7,583.6	138.4	140.9	-66.85	6,983.1	32.9	326.6	66.0	260.58	1.253 Level 3		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 215-2920H - Wellbore #1 - Plan #1 (3)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
15,200.0	7,712.0	15,120.2	7,583.2	140.3	142.8	-66.79	7,083.1	36.2	326.7	62.7	264.06	1.237	Level 2	
15,300.0	7,712.0	15,220.2	7,582.8	142.2	144.8	-66.72	7,183.0	39.6	326.9	59.3	267.55	1.222	Level 2	
15,400.0	7,712.0	15,320.2	7,582.4	144.1	146.8	-66.65	7,283.0	42.9	327.0	56.0	271.03	1.207	Level 2	
15,500.0	7,712.0	15,420.2	7,582.0	146.0	148.7	-66.58	7,382.9	46.3	327.2	52.7	274.50	1.192	Level 2	
15,600.0	7,712.0	15,520.2	7,581.5	147.9	150.7	-66.51	7,482.8	49.6	327.3	49.3	277.98	1.177	Level 2	
15,700.0	7,712.0	15,620.2	7,581.1	149.8	152.6	-66.44	7,582.8	53.0	327.5	46.0	281.45	1.163	Level 2	
15,800.0	7,712.0	15,720.2	7,580.7	151.7	154.6	-66.37	7,682.7	56.3	327.6	42.7	284.92	1.150	Level 2	
15,900.0	7,712.0	15,820.2	7,580.3	153.6	156.6	-66.31	7,782.7	59.7	327.8	39.4	288.39	1.136	Level 2	
16,000.0	7,712.0	15,920.2	7,579.9	155.5	158.5	-66.24	7,882.6	63.0	327.9	36.0	291.85	1.124	Level 2	
16,100.0	7,712.0	16,020.2	7,579.5	157.5	160.5	-66.17	7,982.6	66.4	328.0	32.7	295.31	1.111	Level 2	
16,200.0	7,712.0	16,120.2	7,579.0	159.4	162.4	-66.10	8,082.5	69.7	328.2	29.4	298.77	1.098	Level 2	
16,300.0	7,712.0	16,220.2	7,578.6	161.3	164.4	-66.03	8,182.4	73.1	328.3	26.1	302.23	1.086	Level 2	
16,400.0	7,712.0	16,320.2	7,578.2	163.2	166.4	-65.96	8,282.4	76.4	328.5	22.8	305.68	1.075	Level 2	
16,500.0	7,712.0	16,420.2	7,577.8	165.1	168.3	-65.89	8,382.3	79.8	328.6	19.5	309.13	1.063	Level 2	
16,600.0	7,712.0	16,520.2	7,577.4	167.0	170.3	-65.83	8,482.3	83.1	328.8	16.2	312.57	1.052	Level 2	
16,700.0	7,712.0	16,620.2	7,576.9	168.9	172.3	-65.76	8,582.2	86.5	328.9	12.9	316.02	1.041	Level 2	
16,800.0	7,712.0	16,720.2	7,576.5	170.8	174.2	-65.69	8,682.2	89.8	329.1	9.6	319.46	1.030	Level 2	
16,900.0	7,712.0	16,820.2	7,576.1	172.7	176.2	-65.62	8,782.1	93.2	329.2	6.3	322.89	1.020	Level 2	
17,000.0	7,712.0	16,920.2	7,575.7	174.6	178.1	-65.55	8,882.0	96.6	329.4	3.1	326.33	1.009	Level 2	
17,100.0	7,712.0	17,020.2	7,575.3	176.5	180.1	-65.48	8,982.0	99.9	329.5	-0.2	329.76	0.999	Level 1	
17,200.0	7,712.0	17,120.2	7,574.8	178.4	182.1	-65.42	9,081.9	103.3	329.7	-3.5	333.18	0.990	Level 1	
17,300.0	7,712.0	17,220.2	7,574.4	180.4	184.0	-65.35	9,181.9	106.6	329.8	-6.8	336.61	0.980	Level 1	
17,400.0	7,712.0	17,320.2	7,574.0	182.3	186.0	-65.28	9,281.8	110.0	330.0	-10.0	340.03	0.970	Level 1	
17,500.0	7,712.0	17,420.2	7,573.6	184.2	188.0	-65.21	9,381.8	113.3	330.1	-13.3	343.44	0.961	Level 1	
17,600.0	7,712.0	17,520.2	7,573.2	186.1	189.9	-65.14	9,481.7	116.7	330.3	-16.6	346.86	0.952	Level 1	
17,700.0	7,712.0	17,620.2	7,572.7	188.0	191.9	-65.07	9,581.6	120.1	330.4	-19.8	350.27	0.943	Level 1	
17,800.0	7,712.0	17,720.2	7,572.3	189.9	193.9	-65.00	9,681.6	123.4	330.6	-23.1	353.68	0.935	Level 1	
17,843.0	7,712.0	17,763.3	7,572.1	190.7	194.7	-64.97	9,724.6	124.9	330.7	-24.5	355.14	0.931	Level 1	
17,882.4	7,712.0	17,793.1	7,572.0	191.5	195.3	-64.95	9,754.4	125.9	330.9	-25.5	356.32	0.929	Level 1, ES, SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.97	0.0	24.6	24.6					
100.0	100.0	100.0	100.0	0.1	0.1	89.97	0.0	24.6	24.6	24.4	0.22	109.343		
200.0	200.0	200.0	200.0	0.3	0.3	89.97	0.0	24.6	24.6	23.9	0.67	36.448		
300.0	300.0	300.0	300.0	0.6	0.6	89.97	0.0	24.6	24.6	23.5	1.12	21.869		
400.0	400.0	400.0	400.0	0.8	0.8	89.97	0.0	24.6	24.6	23.0	1.57	15.620		
500.0	500.0	500.0	500.0	1.0	1.0	89.97	0.0	24.6	24.6	22.6	2.02	12.149		
600.0	600.0	600.0	600.0	1.2	1.2	89.97	0.0	24.6	24.6	22.1	2.47	9.940		
700.0	700.0	700.0	700.0	1.5	1.5	89.97	0.0	24.6	24.6	21.7	2.92	8.411		
800.0	800.0	800.0	800.0	1.7	1.7	89.97	0.0	24.6	24.6	21.2	3.37	7.290		
900.0	900.0	900.0	900.0	1.9	1.9	89.97	0.0	24.6	24.6	20.8	3.82	6.432		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.97	0.0	24.6	24.6	20.3	4.27	5.755		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.97	0.0	24.6	24.6	19.9	4.72	5.207		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.97	0.0	24.6	24.6	19.4	5.17	4.754		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.97	0.0	24.6	24.6	19.0	5.62	4.374		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.97	0.0	24.6	24.6	18.5	6.07	4.050		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.97	0.0	24.6	24.6	18.1	6.52	3.770 CC		
1,600.0	1,600.0	1,599.6	1,599.6	3.5	3.5	92.50	-1.1	25.2	25.3	18.3	6.94	3.642		
1,700.0	1,700.0	1,699.2	1,699.1	3.7	3.6	99.23	-4.4	27.3	27.6	20.3	7.34	3.765		
1,800.0	1,800.0	1,798.5	1,798.2	3.9	3.8	-67.34	-10.0	30.6	31.7	24.0	7.72	4.111		
1,900.0	1,899.9	1,897.6	1,896.9	4.1	4.0	-63.29	-17.7	35.3	37.0	28.9	8.07	4.579		
2,000.0	1,999.7	1,996.6	1,995.2	4.3	4.2	-61.24	-27.6	41.3	43.2	34.7	8.44	5.112		
2,100.0	2,099.3	2,095.4	2,093.0	4.4	4.5	-60.54	-39.6	48.5	50.2	41.4	8.83	5.682		
2,200.0	2,198.6	2,194.3	2,190.5	4.6	4.7	-60.77	-53.8	57.1	57.9	48.7	9.25	6.265		
2,300.0	2,297.5	2,294.0	2,288.7	4.9	5.0	-62.58	-68.6	66.1	65.0	55.3	9.70	6.703		
2,400.0	2,396.2	2,393.7	2,386.9	5.1	5.3	-65.46	-83.5	75.1	71.4	61.2	10.20	6.995		
2,500.0	2,494.9	2,493.5	2,485.1	5.4	5.6	-67.94	-98.4	84.1	77.8	67.1	10.74	7.247		
2,600.0	2,593.5	2,593.2	2,583.3	5.7	5.9	-70.04	-113.2	93.1	84.4	73.1	11.31	7.467		
2,700.0	2,692.2	2,693.0	2,681.5	5.9	6.3	-71.83	-128.1	102.0	91.1	79.2	11.90	7.657		
2,800.0	2,790.9	2,792.7	2,779.7	6.2	6.6	-73.38	-142.9	111.0	97.9	85.4	12.51	7.823		
2,900.0	2,889.5	2,892.4	2,878.0	6.6	7.0	-74.72	-157.8	120.0	104.7	91.5	13.14	7.966		
3,000.0	2,988.2	2,992.2	2,976.2	6.9	7.3	-75.90	-172.7	129.0	111.6	97.8	13.79	8.090		
3,100.0	3,086.8	3,091.9	3,074.4	7.2	7.7	-76.94	-187.5	138.0	118.5	104.0	14.45	8.198		
3,200.0	3,185.5	3,191.6	3,172.6	7.5	8.1	-77.87	-202.4	147.0	125.4	110.3	15.12	8.293		
3,300.0	3,284.2	3,291.4	3,270.8	7.9	8.4	-78.70	-217.3	156.0	132.4	116.6	15.81	8.375		
3,400.0	3,382.8	3,391.1	3,369.0	8.2	8.8	-79.45	-232.1	165.0	139.4	122.9	16.50	8.448		
3,500.0	3,481.5	3,490.9	3,467.2	8.6	9.2	-80.12	-247.0	174.0	146.4	129.2	17.20	8.512		
3,600.0	3,580.1	3,590.6	3,565.5	8.9	9.6	-80.74	-261.9	183.0	153.5	135.6	17.91	8.569		
3,700.0	3,678.8	3,690.3	3,663.7	9.3	9.9	-81.30	-276.7	192.0	160.5	141.9	18.62	8.619		
3,800.0	3,777.5	3,790.1	3,761.9	9.6	10.3	-81.81	-291.6	200.9	167.6	148.2	19.34	8.664		
3,900.0	3,876.1	3,889.8	3,860.1	10.0	10.7	-82.28	-306.5	209.9	174.7	154.6	20.07	8.704		
4,000.0	3,974.8	3,989.6	3,958.3	10.3	11.1	-82.72	-321.3	218.9	181.8	161.0	20.80	8.740		
4,100.0	4,073.5	4,089.3	4,056.5	10.7	11.5	-83.12	-336.2	227.9	188.9	167.3	21.53	8.773		
4,200.0	4,172.1	4,189.0	4,154.7	11.1	11.9	-83.49	-351.1	236.9	196.0	173.7	22.27	8.802		
4,300.0	4,270.8	4,288.8	4,253.0	11.4	12.3	-83.84	-365.9	245.9	203.1	180.1	23.00	8.829		
4,400.0	4,369.4	4,388.5	4,351.2	11.8	12.7	-84.16	-380.8	254.9	210.2	186.5	23.75	8.853		
4,500.0	4,468.1	4,488.3	4,449.4	12.2	13.0	-84.46	-395.7	263.9	217.4	192.9	24.49	8.875		
4,600.0	4,566.8	4,588.0	4,547.6	12.5	13.4	-84.74	-410.5	272.9	224.5	199.3	25.24	8.895		
4,700.0	4,665.4	4,687.7	4,645.8	12.9	13.8	-85.01	-425.4	281.9	231.7	205.7	25.99	8.914		
4,800.0	4,764.1	4,787.5	4,744.0	13.3	14.2	-85.26	-440.3	290.8	238.8	212.1	26.74	8.931		
4,900.0	4,862.7	4,887.2	4,842.2	13.6	14.6	-85.49	-455.1	299.8	246.0	218.5	27.49	8.946		
5,000.0	4,961.4	4,986.9	4,940.5	14.0	15.0	-85.71	-470.0	308.8	253.1	224.9	28.25	8.961		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,060.1	5,086.7	5,038.7	14.4	15.4	-85.92	-484.9	317.8	260.3	231.3	29.00	8.974		
5,200.0	5,158.7	5,186.4	5,136.9	14.8	15.8	-86.12	-499.7	326.8	267.4	237.7	29.76	8.986		
5,300.0	5,257.4	5,286.2	5,235.1	15.1	16.2	-86.31	-514.6	335.8	274.6	244.1	30.52	8.998		
5,400.0	5,356.1	5,385.9	5,333.3	15.5	16.6	-86.49	-529.5	344.8	281.8	250.5	31.28	9.009		
5,500.0	5,454.7	5,485.6	5,431.5	15.9	17.0	-86.66	-544.3	353.8	288.9	256.9	32.04	9.019		
5,600.0	5,553.4	5,585.4	5,529.7	16.3	17.4	-86.82	-559.2	362.8	296.1	263.3	32.80	9.028		
5,700.0	5,652.0	5,685.1	5,628.0	16.7	17.8	-86.97	-574.1	371.8	303.3	269.7	33.56	9.036		
5,800.0	5,750.7	5,784.9	5,726.2	17.0	18.2	-87.12	-588.9	380.8	310.5	276.1	34.33	9.044		
5,900.0	5,849.4	5,884.6	5,824.4	17.4	18.6	-87.27	-603.8	389.7	317.7	282.6	35.08	9.054		
6,000.0	5,948.4	5,984.3	5,922.6	17.7	19.0	-87.14	-618.6	398.7	324.9	289.2	35.71	9.099		
6,100.0	6,047.8	6,085.1	6,021.8	17.9	19.4	-86.42	-633.6	407.8	332.4	296.2	36.26	9.169		
6,200.0	6,147.6	6,190.6	6,126.1	18.1	19.7	-85.46	-647.0	415.9	339.0	302.4	36.65	9.250		
6,300.0	6,247.5	6,296.4	6,231.3	18.3	20.0	-84.46	-657.2	422.0	344.3	307.3	36.97	9.311		
6,400.0	6,347.5	6,402.7	6,337.3	18.4	20.2	-89.84	-664.0	426.2	348.0	310.6	37.41	9.303		
6,500.0	6,447.5	6,509.4	6,443.9	18.6	20.3	90.41	-667.5	428.3	350.0	312.3	37.68	9.290		
6,600.0	6,547.5	6,613.0	6,547.5	18.7	20.5	90.49	-668.0	428.6	350.3	312.3	37.97	9.226		
6,700.0	6,647.5	6,713.0	6,647.5	18.9	20.6	90.49	-668.0	428.6	350.3	312.0	38.25	9.159		
6,800.0	6,747.5	6,813.0	6,747.5	19.0	20.8	90.49	-668.0	428.6	350.3	311.8	38.53	9.092		
6,900.0	6,847.5	6,913.0	6,847.5	19.1	20.9	90.49	-668.0	428.6	350.3	311.5	38.82	9.024		
6,936.8	6,884.3	6,949.8	6,884.3	19.2	20.9	90.49	-668.0	428.6	350.3	311.4	38.92	9.000		
7,000.0	6,947.5	7,012.3	6,946.7	19.3	21.0	90.19	-666.2	428.6	350.3	311.2	39.11	8.958		
7,100.0	7,047.4	7,109.4	7,042.8	19.4	21.0	86.35	-652.7	429.1	350.9	311.6	39.27	8.937		
7,200.0	7,146.4	7,204.6	7,134.5	19.4	21.0	84.23	-627.1	429.9	352.0	312.6	39.37	8.941		
7,300.0	7,242.3	7,298.4	7,220.6	19.4	20.8	82.24	-590.2	431.2	353.5	314.3	39.21	9.015		
7,400.0	7,333.5	7,390.8	7,300.0	19.2	20.6	80.43	-543.1	432.7	355.2	316.4	38.82	9.149		
7,500.0	7,418.1	7,482.0	7,371.8	18.9	20.3	78.80	-487.0	434.6	357.0	318.8	38.26	9.332		
7,600.0	7,494.5	7,572.3	7,435.3	18.7	20.1	77.39	-423.0	436.8	358.9	321.3	37.60	9.545		
7,700.0	7,561.2	7,661.7	7,489.8	18.4	19.8	76.21	-352.2	439.1	360.6	323.7	36.94	9.762		
7,800.0	7,616.9	7,750.0	7,534.5	18.2	19.6	75.28	-276.1	441.7	362.1	325.7	36.39	9.951		
7,900.0	7,660.5	7,838.7	7,569.6	18.2	19.4	74.59	-194.8	444.4	363.3	327.2	36.06	10.073		
8,000.0	7,691.1	7,926.6	7,594.3	18.2	19.2	74.17	-110.5	447.2	364.0	327.9	36.06	10.094		
8,100.0	7,708.3	8,014.4	7,608.4	18.5	19.1	74.01	-24.0	450.1	364.3	327.9	36.44	9.997		
8,188.1	7,713.3	8,091.9	7,612.0	18.9	19.2	73.87	53.4	452.6	364.5	327.5	37.09	9.830		
8,200.0	7,712.0	8,103.9	7,611.9	18.9	19.2	74.05	65.4	453.0	364.2	327.0	37.22	9.784		
8,300.0	7,712.0	8,203.9	7,611.5	19.5	19.7	73.99	165.3	456.4	364.3	325.9	38.43	9.480		
8,400.0	7,712.0	8,303.9	7,611.1	20.3	20.5	73.93	265.2	459.7	364.4	324.5	39.94	9.124		
8,500.0	7,712.0	8,403.9	7,610.7	21.0	21.4	73.87	365.2	463.1	364.5	323.0	41.55	8.775		
8,600.0	7,712.0	8,503.9	7,610.3	21.9	22.4	73.81	465.1	466.4	364.7	321.3	43.40	8.403		
8,700.0	7,712.0	8,603.9	7,609.9	23.1	23.6	73.75	565.1	469.7	364.8	319.2	45.60	7.999		
8,800.0	7,712.0	8,703.9	7,609.5	24.3	24.9	73.69	665.0	473.1	364.9	316.9	48.00	7.602		
8,900.0	7,712.0	8,803.9	7,609.1	25.6	26.2	73.63	765.0	476.4	365.0	314.5	50.55	7.221		
9,000.0	7,712.0	8,903.9	7,608.7	27.0	27.6	73.57	864.9	479.7	365.1	311.9	53.23	6.859		
9,100.0	7,712.0	9,003.9	7,608.3	28.5	29.1	73.51	964.8	483.1	365.2	309.2	56.03	6.519		
9,200.0	7,712.0	9,103.9	7,607.9	30.0	30.6	73.45	1,064.8	486.4	365.3	306.4	58.92	6.200		
9,300.0	7,712.0	9,203.9	7,607.5	31.6	32.1	73.39	1,164.7	489.7	365.5	303.6	61.90	5.904		
9,400.0	7,712.0	9,303.9	7,607.1	33.2	33.7	73.33	1,264.7	493.1	365.6	300.6	64.95	5.628		
9,500.0	7,712.0	9,403.9	7,606.7	34.8	35.3	73.27	1,364.6	496.4	365.7	297.6	68.06	5.373		
9,600.0	7,712.0	9,503.9	7,606.3	36.4	37.0	73.21	1,464.6	499.7	365.8	294.6	71.23	5.136		
9,700.0	7,712.0	9,603.9	7,605.9	38.1	38.6	73.15	1,564.5	503.1	365.9	291.5	74.44	4.916		
9,800.0	7,712.0	9,703.9	7,605.5	39.8	40.3	73.08	1,664.4	506.4	366.0	288.4	77.69	4.711		
9,900.0	7,712.0	9,803.9	7,605.1	41.5	42.0	73.02	1,764.4	509.7	366.2	285.2	80.98	4.522		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
10,000.0	7,712.0	9,903.9	7,604.7	43.3	43.8	72.96	1,864.3	513.1	366.3	282.0	84.30	4.345		
10,100.0	7,712.0	10,003.9	7,604.3	45.0	45.5	72.90	1,964.3	516.4	366.4	278.8	87.64	4.181		
10,200.0	7,712.0	10,103.9	7,603.9	46.8	47.3	72.84	2,064.2	519.7	366.5	275.5	91.01	4.027		
10,300.0	7,712.0	10,203.9	7,603.5	48.6	49.0	72.78	2,164.2	523.1	366.6	272.2	94.40	3.884		
10,400.0	7,712.0	10,303.9	7,603.1	50.4	50.8	72.72	2,264.1	526.4	366.8	269.0	97.81	3.750		
10,500.0	7,712.0	10,403.9	7,602.7	52.2	52.6	72.66	2,364.0	529.7	366.9	265.7	101.23	3.624		
10,600.0	7,712.0	10,503.9	7,602.2	54.0	54.4	72.60	2,464.0	533.1	367.0	262.3	104.67	3.506		
10,700.0	7,712.0	10,603.9	7,601.8	55.8	56.2	72.54	2,563.9	536.4	367.1	259.0	108.12	3.396		
10,800.0	7,712.0	10,703.9	7,601.4	57.6	58.0	72.48	2,663.9	539.7	367.3	255.7	111.58	3.291		
10,900.0	7,712.0	10,803.9	7,601.0	59.4	59.8	72.42	2,763.8	543.1	367.4	252.3	115.06	3.193		
11,000.0	7,712.0	10,903.9	7,600.6	61.3	61.6	72.36	2,863.8	546.4	367.5	249.0	118.54	3.100		
11,100.0	7,712.0	11,003.9	7,600.2	63.1	63.5	72.30	2,963.7	549.7	367.6	245.6	122.03	3.013		
11,200.0	7,712.0	11,103.9	7,599.8	64.9	65.3	72.24	3,063.6	553.1	367.7	242.2	125.53	2.930		
11,300.0	7,712.0	11,203.9	7,599.4	66.8	67.1	72.18	3,163.6	556.4	367.9	238.8	129.03	2.851		
11,400.0	7,712.0	11,303.9	7,599.0	68.6	69.0	72.12	3,263.5	559.7	368.0	235.5	132.54	2.776		
11,500.0	7,712.0	11,403.9	7,598.6	70.5	70.8	72.05	3,363.5	563.1	368.1	232.1	136.06	2.706		
11,600.0	7,712.0	11,503.9	7,598.2	72.3	72.7	71.99	3,463.4	566.4	368.2	228.7	139.58	2.638		
11,700.0	7,712.0	11,603.9	7,597.8	74.2	74.5	71.93	3,563.4	569.7	368.4	225.3	143.10	2.574		
11,800.0	7,712.0	11,703.9	7,597.4	76.1	76.4	71.87	3,663.3	573.0	368.5	221.9	146.63	2.513		
11,900.0	7,712.0	11,803.9	7,596.9	77.9	78.2	71.81	3,763.2	576.4	368.6	218.5	150.16	2.455		
12,000.0	7,712.0	11,903.9	7,596.5	79.8	80.1	71.75	3,863.2	579.7	368.8	215.1	153.69	2.399		
12,100.0	7,712.0	12,003.8	7,596.1	81.7	82.0	71.69	3,963.1	583.0	368.9	211.7	157.23	2.346		
12,200.0	7,712.0	12,103.8	7,595.7	83.5	83.8	71.63	4,063.1	586.4	369.0	208.2	160.77	2.295		
12,300.0	7,712.0	12,203.8	7,595.3	85.4	85.7	71.57	4,163.0	589.7	369.1	204.8	164.31	2.247		
12,400.0	7,712.0	12,303.8	7,594.9	87.3	87.6	71.51	4,263.0	593.0	369.3	201.4	167.85	2.200		
12,500.0	7,712.0	12,403.8	7,594.5	89.2	89.5	71.45	4,362.9	596.4	369.4	198.0	171.39	2.155		
12,600.0	7,712.0	12,503.8	7,594.1	91.1	91.3	71.39	4,462.8	599.7	369.5	194.6	174.93	2.112		
12,700.0	7,712.0	12,603.8	7,593.7	92.9	93.2	71.33	4,562.8	603.0	369.7	191.2	178.48	2.071		
12,800.0	7,712.0	12,703.8	7,593.2	94.8	95.1	71.27	4,662.7	606.4	369.8	187.8	182.02	2.032		
12,900.0	7,712.0	12,803.8	7,592.8	96.7	97.0	71.21	4,762.7	609.7	369.9	184.4	185.57	1.993		
13,000.0	7,712.0	12,903.8	7,592.4	98.6	98.8	71.15	4,862.6	613.0	370.1	180.9	189.12	1.957		
13,100.0	7,712.0	13,003.8	7,592.0	100.5	100.7	71.09	4,962.6	616.4	370.2	177.5	192.66	1.921		
13,200.0	7,712.0	13,103.8	7,591.6	102.4	102.6	71.03	5,062.5	619.7	370.3	174.1	196.21	1.887		
13,300.0	7,712.0	13,203.8	7,591.2	104.3	104.5	70.97	5,162.4	623.0	370.5	170.7	199.75	1.855		
13,400.0	7,712.0	13,303.8	7,590.8	106.1	106.4	70.91	5,262.4	626.3	370.6	167.3	203.30	1.823		
13,500.0	7,712.0	13,403.8	7,590.4	108.0	108.3	70.85	5,362.3	629.7	370.7	163.9	206.84	1.792		
13,600.0	7,712.0	13,503.8	7,589.9	109.9	110.2	70.79	5,462.3	633.0	370.9	160.5	210.39	1.763		
13,700.0	7,712.0	13,603.8	7,589.5	111.8	112.1	70.72	5,562.2	636.3	371.0	157.1	213.93	1.734		
13,800.0	7,712.0	13,703.8	7,589.1	113.7	113.9	70.66	5,662.2	639.7	371.1	153.6	217.48	1.707		
13,900.0	7,712.0	13,803.8	7,588.7	115.6	115.8	70.60	5,762.1	643.0	371.3	150.2	221.02	1.680		
14,000.0	7,712.0	13,903.8	7,588.3	117.5	117.7	70.54	5,862.0	646.3	371.4	146.8	224.56	1.654		
14,100.0	7,712.0	14,003.8	7,587.9	119.4	119.6	70.48	5,962.0	649.7	371.5	143.4	228.10	1.629		
14,200.0	7,712.0	14,103.8	7,587.5	121.3	121.5	70.42	6,061.9	653.0	371.7	140.0	231.64	1.605		
14,300.0	7,712.0	14,203.8	7,587.1	123.2	123.4	70.36	6,161.9	656.3	371.8	136.6	235.18	1.581		
14,400.0	7,712.0	14,303.8	7,586.6	125.1	125.3	70.30	6,261.8	659.6	371.9	133.2	238.72	1.558		
14,500.0	7,712.0	14,403.8	7,586.2	127.0	127.2	70.24	6,361.8	663.0	372.1	129.8	242.25	1.536		
14,600.0	7,712.0	14,503.8	7,585.8	128.9	129.1	70.18	6,461.7	666.3	372.2	126.4	245.79	1.514		
14,700.0	7,712.0	14,603.8	7,585.4	130.8	131.0	70.12	6,561.6	669.6	372.4	123.0	249.32	1.494 Level 3		
14,800.0	7,712.0	14,703.8	7,585.0	132.7	132.9	70.06	6,661.6	673.0	372.5	119.7	252.85	1.473 Level 3		
14,900.0	7,712.0	14,803.8	7,584.6	134.6	134.8	70.00	6,761.5	676.3	372.6	116.3	256.38	1.453 Level 3		
15,000.0	7,712.0	14,903.8	7,584.1	136.5	136.7	69.94	6,861.5	679.6	372.8	112.9	259.91	1.434 Level 3		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,100.0	7,712.0	15,003.8	7,583.7	138.4	138.6	69.88	6,961.4	682.9	372.9	109.5	263.44	1.416	Level 3	
15,200.0	7,712.0	15,103.8	7,583.3	140.3	140.5	69.82	7,061.4	686.3	373.1	106.1	266.96	1.397	Level 3	
15,300.0	7,712.0	15,203.8	7,582.9	142.2	142.4	69.76	7,161.3	689.6	373.2	102.7	270.49	1.380	Level 3	
15,400.0	7,712.0	15,303.8	7,582.5	144.1	144.3	69.70	7,261.2	692.9	373.4	99.3	274.01	1.363	Level 3	
15,500.0	7,712.0	15,403.8	7,582.1	146.0	146.2	69.64	7,361.2	696.3	373.5	96.0	277.53	1.346	Level 3	
15,600.0	7,712.0	15,503.8	7,581.6	147.9	148.1	69.58	7,461.1	699.6	373.6	92.6	281.05	1.329	Level 3	
15,700.0	7,712.0	15,603.8	7,581.2	149.8	150.0	69.52	7,561.1	702.9	373.8	89.2	284.57	1.314	Level 3	
15,800.0	7,712.0	15,703.8	7,580.8	151.7	151.9	69.46	7,661.0	706.2	373.9	85.8	288.08	1.298	Level 3	
15,900.0	7,712.0	15,803.8	7,580.4	153.6	153.8	69.40	7,761.0	709.6	374.1	82.5	291.59	1.283	Level 3	
16,000.0	7,712.0	15,903.8	7,580.0	155.5	155.7	69.34	7,860.9	712.9	374.2	79.1	295.10	1.268	Level 3	
16,100.0	7,712.0	16,003.8	7,579.5	157.5	157.6	69.28	7,960.8	716.2	374.4	75.7	298.61	1.254	Level 3	
16,200.0	7,712.0	16,103.8	7,579.1	159.4	159.5	69.22	8,060.8	719.6	374.5	72.4	302.12	1.240	Level 2	
16,300.0	7,712.0	16,203.8	7,578.7	161.3	161.4	69.16	8,160.7	722.9	374.7	69.0	305.62	1.226	Level 2	
16,400.0	7,712.0	16,303.8	7,578.3	163.2	163.3	69.10	8,260.7	726.2	374.8	65.7	309.13	1.212	Level 2	
16,500.0	7,712.0	16,403.8	7,577.9	165.1	165.3	69.04	8,360.6	729.5	374.9	62.3	312.63	1.199	Level 2	
16,600.0	7,712.0	16,503.8	7,577.5	167.0	167.2	68.98	8,460.6	732.9	375.1	59.0	316.13	1.187	Level 2	
16,700.0	7,712.0	16,603.8	7,577.0	168.9	169.1	68.92	8,560.5	736.2	375.2	55.6	319.62	1.174	Level 2	
16,800.0	7,712.0	16,703.8	7,576.6	170.8	171.0	68.86	8,660.4	739.5	375.4	52.3	323.12	1.162	Level 2	
16,900.0	7,712.0	16,803.8	7,576.2	172.7	172.9	68.80	8,760.4	742.8	375.5	48.9	326.61	1.150	Level 2	
17,000.0	7,712.0	16,903.8	7,575.8	174.6	174.8	68.74	8,860.3	746.2	375.7	45.6	330.10	1.138	Level 2	
17,100.0	7,712.0	17,003.8	7,575.4	176.5	176.7	68.68	8,960.3	749.5	375.8	42.3	333.58	1.127	Level 2	
17,200.0	7,712.0	17,103.8	7,574.9	178.4	178.6	68.62	9,060.2	752.8	376.0	38.9	337.07	1.115	Level 2	
17,300.0	7,712.0	17,203.8	7,574.5	180.4	180.5	68.56	9,160.2	756.1	376.1	35.6	340.55	1.104	Level 2	
17,400.0	7,712.0	17,303.8	7,574.1	182.3	182.4	68.50	9,260.1	759.5	376.3	32.3	344.03	1.094	Level 2	
17,500.0	7,712.0	17,403.8	7,573.7	184.2	184.3	68.44	9,360.0	762.8	376.4	28.9	347.51	1.083	Level 2	
17,600.0	7,712.0	17,503.8	7,573.2	186.1	186.2	68.38	9,460.0	766.1	376.6	25.6	350.99	1.073	Level 2	
17,700.0	7,712.0	17,603.8	7,572.8	188.0	188.1	68.32	9,559.9	769.5	376.7	22.3	354.46	1.063	Level 2	
17,800.0	7,712.0	17,703.8	7,572.4	189.9	190.1	68.26	9,659.9	772.8	376.9	19.0	357.93	1.053	Level 2	
17,882.4	7,712.0	17,786.2	7,572.1	191.5	191.6	68.21	9,742.2	775.5	377.0	16.2	360.79	1.045	Level 2, ES, SF	

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference				Offset			Semi Major Axis			Distance				Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-49.7		49.7				
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-49.7		49.7	49.5	0.22	221.144	
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-49.7		49.7	49.0	0.67	73.715	
300.0	300.0	300.0	300.0	0.6	0.6	-89.97	0.0	-49.7		49.7	48.6	1.12	44.229	
400.0	400.0	400.0	400.0	0.8	0.8	-89.97	0.0	-49.7		49.7	48.1	1.57	31.592	
500.0	500.0	500.0	500.0	1.0	1.0	-89.97	0.0	-49.7		49.7	47.7	2.02	24.572	
600.0	600.0	600.0	600.0	1.2	1.2	-89.97	0.0	-49.7		49.7	47.2	2.47	20.104	
700.0	700.0	700.0	700.0	1.5	1.5	-89.97	0.0	-49.7		49.7	46.8	2.92	17.011	
800.0	800.0	800.0	800.0	1.7	1.7	-89.97	0.0	-49.7		49.7	46.3	3.37	14.743	
900.0	900.0	900.0	900.0	1.9	1.9	-89.97	0.0	-49.7		49.7	45.9	3.82	13.008	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.97	0.0	-49.7		49.7	45.4	4.27	11.639	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.97	0.0	-49.7		49.7	45.0	4.72	10.531	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.97	0.0	-49.7		49.7	44.5	5.17	9.615	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.97	0.0	-49.7		49.7	44.1	5.62	8.846	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.97	0.0	-49.7		49.7	43.6	6.07	8.191	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.97	0.0	-49.7		49.7	43.2	6.52	7.626	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.97	0.0	-49.7		49.7	42.7	6.97	7.134	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.97	0.0	-49.7		49.7	42.3	7.42	6.701 CC, ES	
1,800.0	1,800.0	1,799.1	1,799.1	3.9	3.9	97.13	-0.9	-50.6		50.8	42.9	7.81	6.498	
1,900.0	1,899.9	1,898.1	1,898.0	4.1	4.1	98.19	-3.7	-53.2		53.9	45.7	8.16	6.608	
2,000.0	1,999.7	1,997.0	1,996.7	4.3	4.3	99.70	-8.4	-57.6		59.2	50.7	8.52	6.950	
2,100.0	2,099.3	2,095.7	2,095.0	4.4	4.5	101.40	-14.8	-63.8		66.6	57.7	8.89	7.492	
2,200.0	2,198.6	2,194.1	2,192.7	4.6	4.7	103.08	-23.1	-71.7		76.3	67.0	9.30	8.204	
2,300.0	2,297.5	2,292.1	2,289.7	4.9	4.9	104.60	-33.2	-81.2		88.1	78.4	9.73	9.053	
2,400.0	2,396.2	2,389.8	2,386.0	5.1	5.2	105.69	-45.1	-92.4		101.9	91.7	10.20	9.985	
2,500.0	2,494.9	2,487.1	2,481.5	5.4	5.4	105.56	-58.6	-105.3		117.2	106.4	10.72	10.933	
2,600.0	2,593.5	2,585.8	2,578.1	5.7	5.7	105.01	-73.3	-119.2		133.1	121.8	11.26	11.817	
2,700.0	2,692.2	2,684.5	2,674.8	5.9	6.1	104.58	-87.9	-133.0		149.0	137.2	11.83	12.595	
2,800.0	2,790.9	2,783.2	2,771.4	6.2	6.4	104.24	-102.5	-146.9		165.0	152.6	12.43	13.278	
2,900.0	2,889.5	2,881.9	2,868.0	6.6	6.8	103.95	-117.2	-160.8		181.0	167.9	13.04	13.879	
3,000.0	2,988.2	2,980.6	2,964.7	6.9	7.1	103.72	-131.8	-174.6		196.9	183.3	13.67	14.408	
3,100.0	3,086.8	3,079.4	3,061.3	7.2	7.5	103.51	-146.4	-188.5		212.9	198.6	14.31	14.877	
3,200.0	3,185.5	3,178.1	3,157.9	7.5	7.9	103.34	-161.1	-202.4		228.9	213.9	14.97	15.292	
3,300.0	3,284.2	3,276.8	3,254.6	7.9	8.3	103.19	-175.7	-216.2		244.8	229.2	15.63	15.661	
3,400.0	3,382.8	3,375.5	3,351.2	8.2	8.7	103.05	-190.4	-230.1		260.8	244.5	16.31	15.992	
3,500.0	3,481.5	3,474.2	3,447.8	8.6	9.1	102.94	-205.0	-244.0		276.8	259.8	16.99	16.287	
3,600.0	3,580.1	3,572.9	3,544.5	8.9	9.5	102.83	-219.6	-257.9		292.8	275.1	17.69	16.553	
3,700.0	3,678.8	3,671.6	3,641.1	9.3	9.9	102.74	-234.3	-271.7		308.7	290.3	18.38	16.793	
3,800.0	3,777.5	3,770.4	3,737.7	9.6	10.3	102.65	-248.9	-285.6		324.7	305.6	19.09	17.010	
3,900.0	3,876.1	3,869.1	3,834.4	10.0	10.7	102.58	-263.5	-299.5		340.7	320.9	19.80	17.208	
4,000.0	3,974.8	3,967.8	3,931.0	10.3	11.2	102.51	-278.2	-313.3		356.7	336.1	20.51	17.387	
4,100.0	4,073.5	4,066.5	4,027.6	10.7	11.6	102.44	-292.8	-327.2		372.6	351.4	21.23	17.551	
4,200.0	4,172.1	4,165.2	4,124.3	11.1	12.0	102.38	-307.5	-341.1		388.6	366.7	21.95	17.701	
4,300.0	4,270.8	4,263.9	4,220.9	11.4	12.4	102.33	-322.1	-355.0		404.6	381.9	22.68	17.839	
4,400.0	4,369.4	4,362.6	4,317.5	11.8	12.9	102.28	-336.7	-368.8		420.6	397.2	23.41	17.966	
4,500.0	4,468.1	4,461.4	4,414.2	12.2	13.3	102.23	-351.4	-382.7		436.6	412.4	24.14	18.083	
4,600.0	4,566.8	4,560.1	4,510.8	12.5	13.7	102.19	-366.0	-396.6		452.5	427.7	24.88	18.192	
4,700.0	4,665.4	4,658.8	4,607.4	12.9	14.2	102.15	-380.6	-410.4		468.5	442.9	25.61	18.292	
4,800.0	4,764.1	4,757.5	4,704.1	13.3	14.6	102.11	-395.3	-424.3		484.5	458.1	26.35	18.386	
4,900.0	4,862.7	4,856.2	4,800.7	13.6	15.0	102.08	-409.9	-438.2		500.5	473.4	27.09	18.473	
5,000.0	4,961.4	4,954.9	4,897.3	14.0	15.5	102.05	-424.6	-452.0		516.5	488.6	27.84	18.554	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,060.1	5,053.6	4,994.0	14.4	15.9	102.02	-439.2	-465.9	532.4	503.9	28.58	18.629		
5,200.0	5,158.7	5,152.4	5,090.6	14.8	16.4	101.99	-453.8	-479.8	548.4	519.1	29.33	18.700		
5,300.0	5,257.4	5,251.1	5,187.2	15.1	16.8	101.96	-468.5	-493.7	564.4	534.3	30.07	18.767		
5,400.0	5,356.1	5,349.8	5,283.9	15.5	17.2	101.93	-483.1	-507.5	580.4	549.6	30.82	18.829		
5,500.0	5,454.7	5,448.5	5,380.5	15.9	17.7	101.91	-497.7	-521.4	596.4	564.8	31.57	18.888		
5,600.0	5,553.4	5,547.2	5,477.1	16.3	18.1	101.88	-512.4	-535.3	612.3	580.0	32.32	18.943		
5,700.0	5,652.0	5,645.9	5,573.8	16.7	18.6	101.86	-527.0	-549.1	628.3	595.2	33.08	18.996		
5,800.0	5,750.7	5,744.6	5,670.4	17.0	19.0	101.84	-541.7	-563.0	644.3	610.5	33.83	19.045		
5,900.0	5,849.4	5,843.4	5,767.0	17.4	19.5	101.87	-556.3	-576.9	660.3	625.7	34.58	19.092		
6,000.0	5,948.4	5,942.1	5,863.7	17.7	19.9	101.96	-570.9	-590.8	675.8	640.5	35.25	19.172		
6,100.0	6,047.8	6,040.8	5,960.3	17.9	20.3	101.77	-585.6	-604.6	690.6	654.8	35.86	19.257		
6,200.0	6,147.6	6,139.4	6,056.8	18.1	20.8	101.30	-600.2	-618.5	704.8	668.4	36.42	19.352		
6,300.0	6,247.5	6,237.7	6,153.0	18.3	21.2	100.58	-614.8	-632.3	718.5	681.6	36.92	19.463		
6,400.0	6,347.5	6,342.7	6,255.9	18.4	21.7	-87.25	-630.1	-646.8	731.7	694.6	37.16	19.567		
6,500.0	6,447.5	6,461.6	6,373.1	18.6	22.1	-88.43	-644.8	-660.7	743.0	705.5	37.51	19.808		
6,600.0	6,547.5	6,582.1	6,492.5	18.7	22.4	-89.31	-656.0	-671.3	751.7	713.9	37.83	19.870		
6,700.0	6,647.5	6,703.6	6,613.6	18.9	22.6	-89.89	-663.6	-678.5	757.6	719.4	38.15	19.859		
6,800.0	6,747.5	6,825.8	6,735.7	19.0	22.8	-90.18	-667.4	-682.2	760.6	722.1	38.46	19.774		
6,900.0	6,847.5	6,937.6	6,847.5	19.1	23.0	-90.22	-668.0	-682.7	761.0	722.2	38.78	19.626		
7,000.0	6,947.5	7,037.6	6,947.5	19.3	23.1	-90.22	-668.0	-682.7	761.0	721.9	39.07	19.480		
7,100.0	7,047.4	7,139.7	7,049.6	19.4	23.2	-92.13	-666.0	-682.6	761.0	721.5	39.53	19.251		
7,200.0	7,146.4	7,243.8	7,152.4	19.4	23.2	-92.08	-650.7	-682.1	761.0	721.4	39.57	19.232		
7,300.0	7,242.3	7,347.7	7,251.8	19.4	23.1	-92.00	-620.7	-681.1	761.0	721.6	39.38	19.325		
7,400.0	7,333.5	7,451.4	7,345.6	19.2	22.9	-91.87	-576.8	-679.7	760.9	721.9	39.00	19.512		
7,500.0	7,418.1	7,554.8	7,431.9	18.9	22.6	-91.71	-520.0	-677.8	760.8	722.3	38.49	19.766		
7,600.0	7,494.5	7,657.9	7,508.8	18.7	22.3	-91.51	-451.6	-675.5	760.8	722.8	37.94	20.052		
7,700.0	7,561.2	7,760.5	7,574.9	18.4	21.9	-91.28	-373.3	-672.9	760.7	723.3	37.43	20.323		
7,800.0	7,616.9	7,862.6	7,628.9	18.2	21.6	-91.03	-286.8	-670.0	760.6	723.6	37.06	20.524		
7,900.0	7,660.5	7,964.2	7,669.9	18.2	21.2	-90.76	-193.9	-666.9	760.6	723.7	36.91	20.604		
8,000.0	7,691.1	8,065.3	7,697.2	18.2	20.9	-90.47	-96.7	-663.7	760.6	723.5	37.06	20.523		
8,100.0	7,708.3	8,165.8	7,710.6	18.5	20.6	-90.18	2.8	-660.4	760.6	723.0	37.54	20.262		
8,116.5	7,709.8	8,182.3	7,711.4	18.6	20.5	-90.12	19.2	-659.8	760.5	722.9	37.66	20.195		
8,200.0	7,712.0	8,265.8	7,712.0	18.9	20.3	-90.00	102.7	-657.1	760.6	722.3	38.30	19.860		
8,300.0	7,712.0	8,365.9	7,712.0	19.5	20.0	-90.00	202.7	-653.7	760.6	721.3	39.26	19.372		
8,400.0	7,712.0	8,465.9	7,712.0	20.3	20.5	-90.00	302.6	-650.4	760.6	720.0	40.53	18.763		
8,500.0	7,712.0	8,565.9	7,712.0	21.0	21.4	-90.00	402.6	-647.1	760.6	718.6	41.95	18.133		
8,600.0	7,712.0	8,665.9	7,712.0	21.9	22.3	-90.00	502.5	-643.8	760.6	717.0	43.64	17.429		
8,700.0	7,712.0	8,765.9	7,712.0	23.1	23.4	-90.00	602.5	-640.4	760.6	714.9	45.73	16.631		
8,800.0	7,712.0	8,865.9	7,712.0	24.3	24.5	-90.00	702.4	-637.1	760.6	712.6	48.04	15.831		
8,900.0	7,712.0	8,965.9	7,712.0	25.6	25.7	-90.00	802.4	-633.8	760.6	710.1	50.54	15.050		
9,000.0	7,712.0	9,065.9	7,712.0	27.0	27.0	-90.00	902.3	-630.5	760.6	707.4	53.20	14.298		
9,100.0	7,712.0	9,165.9	7,712.0	28.5	28.4	-90.00	1,002.2	-627.1	760.6	704.6	55.99	13.585		
9,200.0	7,712.0	9,265.9	7,712.0	30.0	29.8	-90.00	1,102.2	-623.8	760.6	701.7	58.90	12.914		
9,300.0	7,712.0	9,365.9	7,712.0	31.6	31.2	-90.00	1,202.1	-620.5	760.6	698.7	61.91	12.285		
9,400.0	7,712.0	9,465.9	7,712.0	33.2	32.7	-90.00	1,302.1	-617.1	760.6	695.6	65.01	11.700		
9,500.0	7,712.0	9,565.9	7,712.0	34.8	34.3	-90.00	1,402.0	-613.8	760.6	692.5	68.19	11.155		
9,600.0	7,712.0	9,665.9	7,712.0	36.4	35.8	-90.00	1,502.0	-610.5	760.6	689.2	71.43	10.649		
9,700.0	7,712.0	9,765.9	7,712.0	38.1	37.5	-90.00	1,601.9	-607.2	760.6	685.9	74.73	10.179		
9,800.0	7,712.0	9,865.9	7,712.0	39.8	39.1	-90.00	1,701.9	-603.8	760.6	682.6	78.07	9.743		
9,900.0	7,712.0	9,965.9	7,712.0	41.5	40.7	-90.00	1,801.8	-600.5	760.7	679.2	81.46	9.337		
10,000.0	7,712.0	10,065.9	7,712.0	43.3	42.4	-90.00	1,901.8	-597.2	760.7	675.8	84.89	8.960		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,100.0	7,712.0	10,165.9	7,712.0	45.0	44.1	-90.00	2,001.7	-593.8	760.7	672.3	88.35	8.609		
10,200.0	7,712.0	10,265.9	7,712.0	46.8	45.8	-90.00	2,101.7	-590.5	760.7	668.8	91.84	8.282		
10,300.0	7,712.0	10,365.9	7,712.0	48.6	47.5	-90.00	2,201.6	-587.2	760.7	665.3	95.36	7.976		
10,400.0	7,712.0	10,465.9	7,712.0	50.4	49.3	-90.00	2,301.6	-583.8	760.7	661.7	98.91	7.691		
10,500.0	7,712.0	10,565.9	7,712.0	52.2	51.0	-90.00	2,401.5	-580.5	760.7	658.2	102.47	7.423		
10,600.0	7,712.0	10,665.9	7,712.0	54.0	52.8	-90.00	2,501.5	-577.2	760.7	654.6	106.05	7.172		
10,700.0	7,712.0	10,765.9	7,712.0	55.8	54.5	-90.00	2,601.4	-573.8	760.7	651.0	109.65	6.937		
10,800.0	7,712.0	10,865.9	7,712.0	57.6	56.3	-90.00	2,701.3	-570.5	760.7	647.4	113.27	6.715		
10,900.0	7,712.0	10,965.9	7,712.0	59.4	58.1	-90.00	2,801.3	-567.2	760.7	643.8	116.90	6.507		
11,000.0	7,712.0	11,065.9	7,712.0	61.3	59.9	-90.00	2,901.2	-563.8	760.6	640.1	120.54	6.310		
11,100.0	7,712.0	11,165.9	7,712.0	63.1	61.7	-90.00	3,001.2	-560.5	760.6	636.4	124.20	6.124		
11,200.0	7,712.0	11,265.9	7,712.0	64.9	63.5	-90.00	3,101.1	-557.2	760.6	632.8	127.86	5.949		
11,300.0	7,712.0	11,365.9	7,712.0	66.8	65.3	-90.00	3,201.1	-553.8	760.6	629.1	131.54	5.783		
11,400.0	7,712.0	11,465.9	7,712.0	68.6	67.2	-90.00	3,301.0	-550.5	760.6	625.4	135.23	5.625		
11,500.0	7,712.0	11,565.9	7,712.0	70.5	69.0	-90.00	3,401.0	-547.2	760.6	621.7	138.92	5.475		
11,600.0	7,712.0	11,665.9	7,712.0	72.3	70.8	-90.00	3,500.9	-543.8	760.6	618.0	142.62	5.333		
11,700.0	7,712.0	11,765.9	7,712.0	74.2	72.7	-90.00	3,600.9	-540.5	760.6	614.3	146.33	5.198		
11,800.0	7,712.0	11,865.9	7,712.0	76.1	74.5	-90.00	3,700.8	-537.1	760.6	610.6	150.04	5.069		
11,900.0	7,712.0	11,966.0	7,712.0	77.9	76.3	-90.00	3,800.8	-533.8	760.6	606.8	153.76	4.947		
12,000.0	7,712.0	12,066.0	7,712.0	79.8	78.2	-90.00	3,900.7	-530.5	760.6	603.1	157.49	4.830		
12,100.0	7,712.0	12,166.0	7,712.0	81.7	80.0	-90.00	4,000.7	-527.1	760.6	599.4	161.22	4.718		
12,200.0	7,712.0	12,266.0	7,712.0	83.5	81.9	-90.00	4,100.6	-523.8	760.6	595.6	164.96	4.611		
12,300.0	7,712.0	12,366.0	7,712.0	85.4	83.8	-90.00	4,200.6	-520.5	760.6	591.9	168.70	4.509		
12,400.0	7,712.0	12,466.0	7,712.0	87.3	85.6	-90.00	4,300.5	-517.1	760.6	588.1	172.44	4.411		
12,500.0	7,712.0	12,566.0	7,712.0	89.2	87.5	-90.00	4,400.4	-513.8	760.6	584.4	176.19	4.317		
12,600.0	7,712.0	12,666.0	7,712.0	91.1	89.3	-90.00	4,500.4	-510.4	760.6	580.6	179.94	4.227		
12,700.0	7,712.0	12,766.0	7,712.0	92.9	91.2	-90.00	4,600.3	-507.1	760.5	576.8	183.70	4.140		
12,800.0	7,712.0	12,866.0	7,712.0	94.8	93.1	-90.00	4,700.3	-503.7	760.5	573.1	187.46	4.057		
12,900.0	7,712.0	12,966.0	7,712.0	96.7	94.9	-90.00	4,800.2	-500.4	760.5	569.3	191.22	3.977		
13,000.0	7,712.0	13,066.0	7,712.0	98.6	96.8	-90.00	4,900.2	-497.1	760.5	565.5	194.99	3.900		
13,100.0	7,712.0	13,166.0	7,712.0	100.5	98.7	-90.00	5,000.1	-493.7	760.5	561.8	198.76	3.826		
13,200.0	7,712.0	13,266.0	7,712.0	102.4	100.6	-90.00	5,100.1	-490.4	760.5	558.0	202.53	3.755		
13,300.0	7,712.0	13,366.0	7,712.0	104.3	102.4	-90.00	5,200.0	-487.0	760.5	554.2	206.30	3.686		
13,400.0	7,712.0	13,466.0	7,712.0	106.1	104.3	-90.00	5,300.0	-483.7	760.5	550.4	210.08	3.620		
13,500.0	7,712.0	13,566.0	7,712.0	108.0	106.2	-90.00	5,399.9	-480.3	760.5	546.6	213.86	3.556		
13,600.0	7,712.0	13,666.0	7,712.0	109.9	108.1	-90.00	5,499.9	-477.0	760.4	542.8	217.64	3.494		
13,700.0	7,712.0	13,766.0	7,712.0	111.8	110.0	-90.00	5,599.8	-473.7	760.4	539.0	221.42	3.434		
13,800.0	7,712.0	13,866.0	7,712.0	113.7	111.9	-90.00	5,699.8	-470.3	760.4	535.2	225.20	3.377		
13,900.0	7,712.0	13,966.0	7,712.0	115.6	113.7	-90.00	5,799.7	-467.0	760.4	531.4	228.99	3.321		
14,000.0	7,712.0	14,066.0	7,712.0	117.5	115.6	-90.00	5,899.7	-463.6	760.4	527.6	232.78	3.267		
14,100.0	7,712.0	14,166.0	7,712.0	119.4	117.5	-90.00	5,999.6	-460.3	760.4	523.8	236.57	3.214		
14,200.0	7,712.0	14,266.0	7,712.0	121.3	119.4	-90.00	6,099.5	-456.9	760.4	520.0	240.36	3.163		
14,300.0	7,712.0	14,366.0	7,712.0	123.2	121.3	-90.00	6,199.5	-453.6	760.3	516.2	244.15	3.114		
14,400.0	7,712.0	14,466.0	7,712.0	125.1	123.2	-90.00	6,299.4	-450.2	760.3	512.4	247.94	3.067		
14,500.0	7,712.0	14,566.0	7,712.0	127.0	125.1	-90.00	6,399.4	-446.9	760.3	508.6	251.74	3.020		
14,600.0	7,712.0	14,666.0	7,712.0	128.9	127.0	-90.00	6,499.3	-443.5	760.3	504.8	255.54	2.975		
14,700.0	7,712.0	14,766.0	7,712.0	130.8	128.9	-90.00	6,599.3	-440.2	760.3	500.9	259.33	2.932		
14,800.0	7,712.0	14,866.0	7,712.0	132.7	130.8	-90.00	6,699.2	-436.8	760.3	497.1	263.13	2.889		
14,900.0	7,712.0	14,966.0	7,712.0	134.6	132.6	-90.00	6,799.2	-433.5	760.2	493.3	266.93	2.848		
15,000.0	7,712.0	15,066.0	7,712.0	136.5	134.5	-90.00	6,899.1	-430.1	760.2	489.5	270.73	2.808		
15,100.0	7,712.0	15,166.0	7,712.0	138.4	136.4	-90.00	6,999.1	-426.8	760.2	485.7	274.54	2.769		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	
Survey Program: 0-MWD													Offset Well Error:	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
15,200.0	7,712.0	15,266.0	7,712.0	140.3	138.3	-90.00	7,099.0	-423.4	760.2	481.9	278.34	2.731		
15,300.0	7,712.0	15,366.0	7,712.0	142.2	140.2	-90.00	7,199.0	-420.1	760.2	478.0	282.14	2.694		
15,400.0	7,712.0	15,466.0	7,712.0	144.1	142.1	-90.00	7,298.9	-416.7	760.2	474.2	285.95	2.658		
15,500.0	7,712.0	15,566.1	7,712.0	146.0	144.0	-90.00	7,398.9	-413.4	760.1	470.4	289.75	2.623		
15,600.0	7,712.0	15,666.1	7,712.0	147.9	145.9	-90.00	7,498.8	-410.0	760.1	466.5	293.56	2.589		
15,700.0	7,712.0	15,766.1	7,712.0	149.8	147.8	-90.00	7,598.7	-406.7	760.1	462.7	297.37	2.556		
15,800.0	7,712.0	15,866.1	7,712.0	151.7	149.7	-90.00	7,698.7	-403.3	760.1	458.9	301.18	2.524		
15,900.0	7,712.0	15,966.1	7,712.0	153.6	151.6	-90.00	7,798.6	-400.0	760.0	455.1	304.99	2.492		
16,000.0	7,712.0	16,066.1	7,712.0	155.5	153.5	-90.00	7,898.6	-396.6	760.0	451.2	308.80	2.461		
16,100.0	7,712.0	16,166.1	7,712.0	157.5	155.4	-90.00	7,998.5	-393.3	760.0	447.4	312.61	2.431		
16,200.0	7,712.0	16,266.1	7,712.0	159.4	157.3	-90.00	8,098.5	-389.9	760.0	443.6	316.42	2.402		
16,300.0	7,712.0	16,366.1	7,712.0	161.3	159.2	-90.00	8,198.4	-386.6	760.0	439.7	320.23	2.373		
16,400.0	7,712.0	16,466.1	7,712.0	163.2	161.1	-90.00	8,298.4	-383.2	759.9	435.9	324.04	2.345		
16,500.0	7,712.0	16,566.1	7,712.0	165.1	163.0	-90.00	8,398.3	-379.9	759.9	432.0	327.86	2.318		
16,600.0	7,712.0	16,666.1	7,712.0	167.0	164.9	-90.00	8,498.3	-376.5	759.9	428.2	331.67	2.291		
16,700.0	7,712.0	16,766.1	7,712.0	168.9	166.8	-90.00	8,598.2	-373.2	759.9	424.4	335.48	2.265		
16,800.0	7,712.0	16,866.1	7,712.0	170.8	168.7	-90.00	8,698.2	-369.8	759.8	420.5	339.30	2.239		
16,900.0	7,712.0	16,966.1	7,712.0	172.7	170.6	-90.00	8,798.1	-366.4	759.8	416.7	343.11	2.214		
17,000.0	7,712.0	17,066.1	7,712.0	174.6	172.5	-90.00	8,898.0	-363.1	759.8	412.8	346.93	2.190		
17,100.0	7,712.0	17,166.1	7,712.0	176.5	174.5	-90.00	8,998.0	-359.7	759.7	409.0	350.74	2.166		
17,200.0	7,712.0	17,266.1	7,712.0	178.4	176.4	-90.00	9,097.9	-356.4	759.7	405.2	354.56	2.143		
17,300.0	7,712.0	17,366.1	7,712.0	180.4	178.3	-90.00	9,197.9	-353.0	759.7	401.3	358.38	2.120		
17,400.0	7,712.0	17,466.1	7,712.0	182.3	180.2	-90.00	9,297.8	-349.7	759.7	397.5	362.20	2.097		
17,500.0	7,712.0	17,566.1	7,712.0	184.2	182.1	-90.00	9,397.8	-346.3	759.6	393.6	366.01	2.075		
17,600.0	7,712.0	17,666.1	7,712.0	186.1	184.0	-90.00	9,497.7	-342.9	759.6	389.8	369.83	2.054		
17,700.0	7,712.0	17,766.1	7,712.0	188.0	185.9	-90.00	9,597.7	-339.6	759.6	385.9	373.65	2.033		
17,800.0	7,712.0	17,866.1	7,712.0	189.9	187.8	-90.00	9,697.6	-336.2	759.5	382.1	377.47	2.012		
17,849.1	7,712.0	17,915.2	7,712.0	190.8	188.7	-90.00	9,746.7	-334.6	759.5	380.2	379.33	2.002		
17,882.4	7,712.0	17,924.1	7,712.0	191.5	188.9	-90.00	9,755.5	-334.3	759.9	379.8	380.12	1.999 SF		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design		Randall Creek 29 SESE Pad Sec.29-T12N-R62W - Randall Creek 505-2920H - Wellbore #1 - Plan #1 (3)											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-100.5	100.5						
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-100.5	100.5	100.3	0.22	447.202			
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-100.5	100.5	99.8	0.67	149.067			
300.0	300.0	300.0	300.0	0.6	0.6	-89.97	0.0	-100.5	100.5	99.4	1.12	89.440			
400.0	400.0	400.0	400.0	0.8	0.8	-89.97	0.0	-100.5	100.5	98.9	1.57	63.886			
500.0	500.0	500.0	500.0	1.0	1.0	-89.97	0.0	-100.5	100.5	98.5	2.02	49.689			
600.0	600.0	600.0	600.0	1.2	1.2	-89.97	0.0	-100.5	100.5	98.0	2.47	40.655			
700.0	700.0	700.0	700.0	1.5	1.5	-89.97	0.0	-100.5	100.5	97.6	2.92	34.400			
800.0	800.0	800.0	800.0	1.7	1.7	-89.97	0.0	-100.5	100.5	97.1	3.37	29.813	CC, ES		
900.0	900.0	897.7	897.7	1.9	1.9	-90.29	-0.5	-101.6	101.7	97.9	3.80	26.780			
1,000.0	1,000.0	995.2	995.1	2.1	2.1	-91.19	-2.2	-105.0	105.1	100.9	4.21	24.974			
1,100.0	1,100.0	1,092.5	1,092.2	2.4	2.3	-92.57	-5.0	-110.5	110.9	106.3	4.63	23.959			
1,200.0	1,200.0	1,189.4	1,188.8	2.6	2.5	-94.26	-8.8	-118.3	119.1	114.1	5.06	23.553	SF		
1,300.0	1,300.0	1,285.9	1,284.6	2.8	2.7	-96.12	-13.7	-128.1	129.8	124.3	5.49	23.625			
1,400.0	1,400.0	1,381.7	1,379.4	3.0	3.0	-98.00	-19.7	-140.1	142.9	137.0	5.94	24.080			
1,500.0	1,500.0	1,476.7	1,473.2	3.3	3.3	-99.82	-26.7	-154.0	158.6	152.2	6.38	24.841			
1,600.0	1,600.0	1,571.0	1,565.7	3.5	3.6	-101.50	-34.6	-169.9	176.7	169.9	6.84	25.847			
1,700.0	1,700.0	1,664.2	1,656.9	3.7	4.0	-103.03	-43.4	-187.6	197.4	190.1	7.30	27.051			
1,800.0	1,800.0	1,756.6	1,746.6	3.9	4.4	82.30	-53.2	-207.1	220.2	212.5	7.69	28.641			
1,900.0	1,899.9	1,848.0	1,834.9	4.1	4.8	81.57	-63.7	-228.3	245.1	237.0	8.09	30.284			
2,000.0	1,999.7	1,940.4	1,923.6	4.3	5.3	81.32	-75.4	-251.6	271.7	263.2	8.52	31.913			
2,100.0	2,099.3	2,036.7	2,015.9	4.4	5.8	81.53	-87.7	-276.3	298.5	289.5	8.97	33.295			
2,200.0	2,198.6	2,133.0	2,108.1	4.6	6.3	82.13	-100.0	-300.9	325.0	315.5	9.44	34.425			
2,300.0	2,297.5	2,229.2	2,200.3	4.9	6.8	83.00	-112.3	-325.6	351.2	341.3	9.95	35.307			
2,400.0	2,396.2	2,325.3	2,292.4	5.1	7.4	84.30	-124.5	-350.2	377.4	366.9	10.49	35.962			
2,500.0	2,494.9	2,421.5	2,384.5	5.4	8.0	85.53	-136.8	-374.8	403.8	392.7	11.07	36.474			
2,600.0	2,593.5	2,517.6	2,476.6	5.7	8.5	86.61	-149.1	-399.4	430.3	418.7	11.67	36.874			
2,700.0	2,692.2	2,613.7	2,568.7	5.9	9.1	87.57	-161.4	-424.0	457.0	444.7	12.29	37.185			
2,800.0	2,790.9	2,709.8	2,660.8	6.2	9.6	88.42	-173.7	-448.6	483.8	470.8	12.93	37.423			
2,900.0	2,889.5	2,805.9	2,752.9	6.6	10.2	89.18	-186.0	-473.2	510.6	497.0	13.58	37.604			
3,000.0	2,988.2	2,902.0	2,845.0	6.9	10.8	89.86	-198.3	-497.9	537.5	523.3	14.24	37.738			
3,100.0	3,086.8	2,998.1	2,937.1	7.2	11.4	90.48	-210.5	-522.5	564.5	549.6	14.92	37.836			
3,200.0	3,185.5	3,094.3	3,029.2	7.5	11.9	91.05	-222.8	-547.1	591.6	576.0	15.61	37.905			
3,300.0	3,284.2	3,190.4	3,121.3	7.9	12.5	91.56	-235.1	-571.7	618.7	602.4	16.30	37.951			
3,400.0	3,382.8	3,286.5	3,213.4	8.2	13.1	92.03	-247.4	-596.3	645.8	628.8	17.01	37.978			
3,500.0	3,481.5	3,382.6	3,305.4	8.6	13.7	92.47	-259.7	-620.9	673.0	655.3	17.71	37.991			
3,600.0	3,580.1	3,478.7	3,397.5	8.9	14.3	92.87	-272.0	-645.5	700.2	681.8	18.43	37.993			
3,700.0	3,678.8	3,574.8	3,489.6	9.3	14.9	93.24	-284.2	-670.2	727.5	708.3	19.15	37.985			
3,800.0	3,777.5	3,671.0	3,581.7	9.6	15.4	93.58	-296.5	-694.8	754.7	734.9	19.88	37.970			
3,900.0	3,876.1	3,767.1	3,673.8	10.0	16.0	93.90	-308.8	-719.4	782.0	761.4	20.61	37.950			
4,000.0	3,974.8	3,863.2	3,765.9	10.3	16.6	94.20	-321.1	-744.0	809.3	788.0	21.34	37.925			
4,100.0	4,073.5	3,959.3	3,858.0	10.7	17.2	94.47	-333.4	-768.6	836.7	814.6	22.08	37.897			
4,200.0	4,172.1	4,055.4	3,950.1	11.1	17.8	94.74	-345.7	-793.2	864.0	841.2	22.82	37.866			
4,300.0	4,270.8	4,151.5	4,042.2	11.4	18.4	94.98	-357.9	-817.9	891.4	867.8	23.56	37.834			
4,400.0	4,369.4	4,247.7	4,134.3	11.8	19.0	95.21	-370.2	-842.5	918.7	894.4	24.31	37.800			
4,500.0	4,468.1	4,343.8	4,226.4	12.2	19.5	95.43	-382.5	-867.1	946.1	921.1	25.05	37.765			
4,600.0	4,566.8	4,439.9	4,318.5	12.5	20.1	95.63	-394.8	-891.7	973.5	947.7	25.80	37.729			
4,700.0	4,665.4	4,536.0	4,410.6	12.9	20.7	95.83	-407.1	-916.3	1,001.0	974.4	26.56	37.694			
4,800.0	4,764.1	4,632.1	4,502.7	13.3	21.3	96.01	-419.4	-940.9	1,028.4	1,001.1	27.31	37.658			
4,900.0	4,862.7	4,728.2	4,594.8	13.6	21.9	96.18	-431.7	-965.5	1,055.8	1,027.7	28.06	37.622			
5,000.0	4,961.4	4,824.3	4,686.9	14.0	22.5	96.35	-443.9	-990.2	1,083.3	1,054.4	28.82	37.587			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference														
Offset														
Semi Major Axis														
Distance														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,060.1	4,920.5	4,779.0	14.4	23.1	96.50	-456.2	-1,014.8	1,110.7	1,081.1	29.58	37.551		
5,200.0	5,158.7	5,016.6	4,871.1	14.8	23.7	96.65	-468.5	-1,039.4	1,138.2	1,107.8	30.34	37.517		
5,300.0	5,257.4	5,112.7	4,963.2	15.1	24.3	96.80	-480.8	-1,064.0	1,165.6	1,134.5	31.10	37.482		
5,400.0	5,356.1	5,208.8	5,055.2	15.5	24.8	96.93	-493.1	-1,088.6	1,193.1	1,161.2	31.86	37.448		

Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5369.0ft (Original Well Elev)

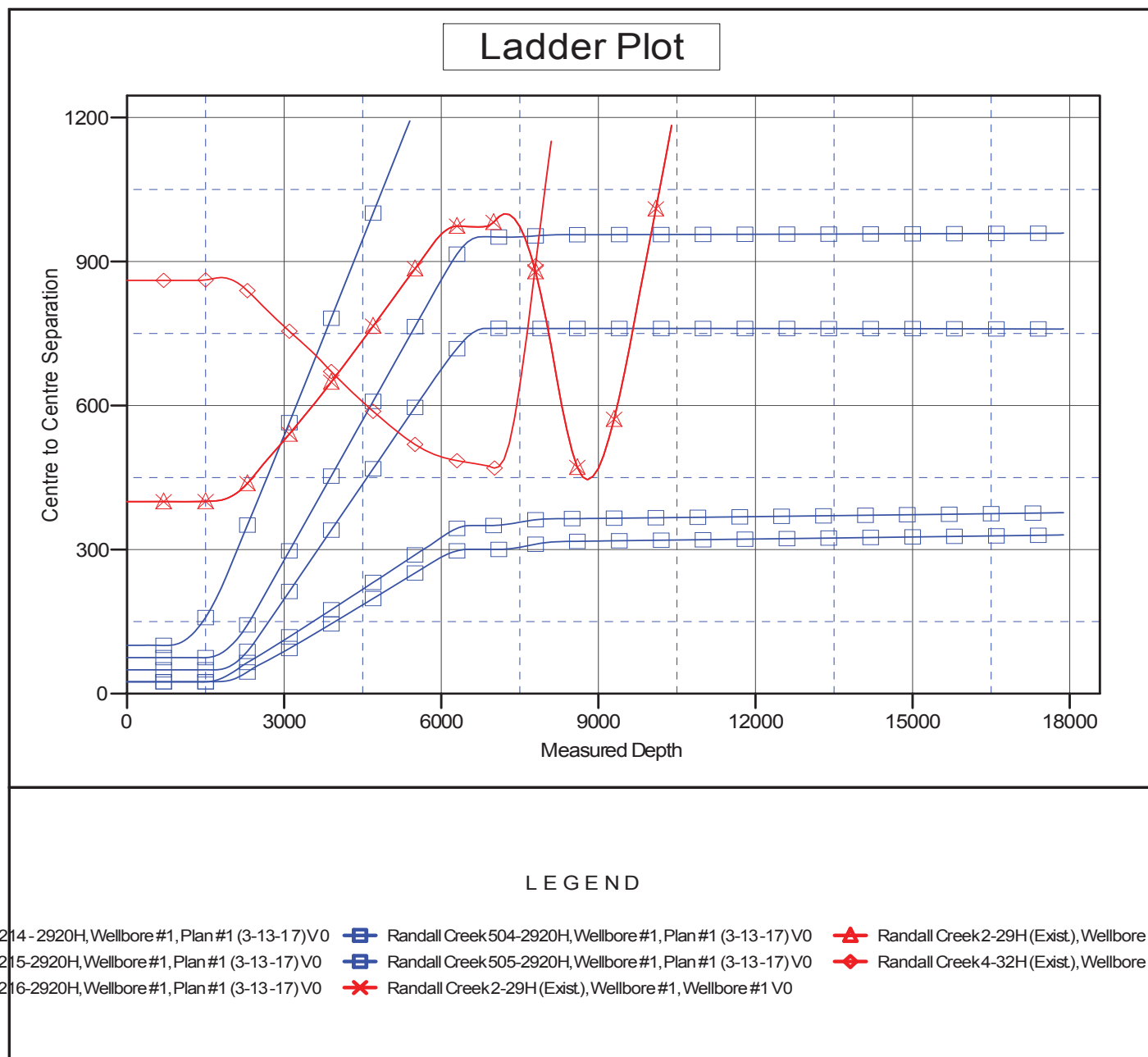
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Randall Creek 503-2920H

Coordinate System is US State Plane 1983, Colorado Northern Zone

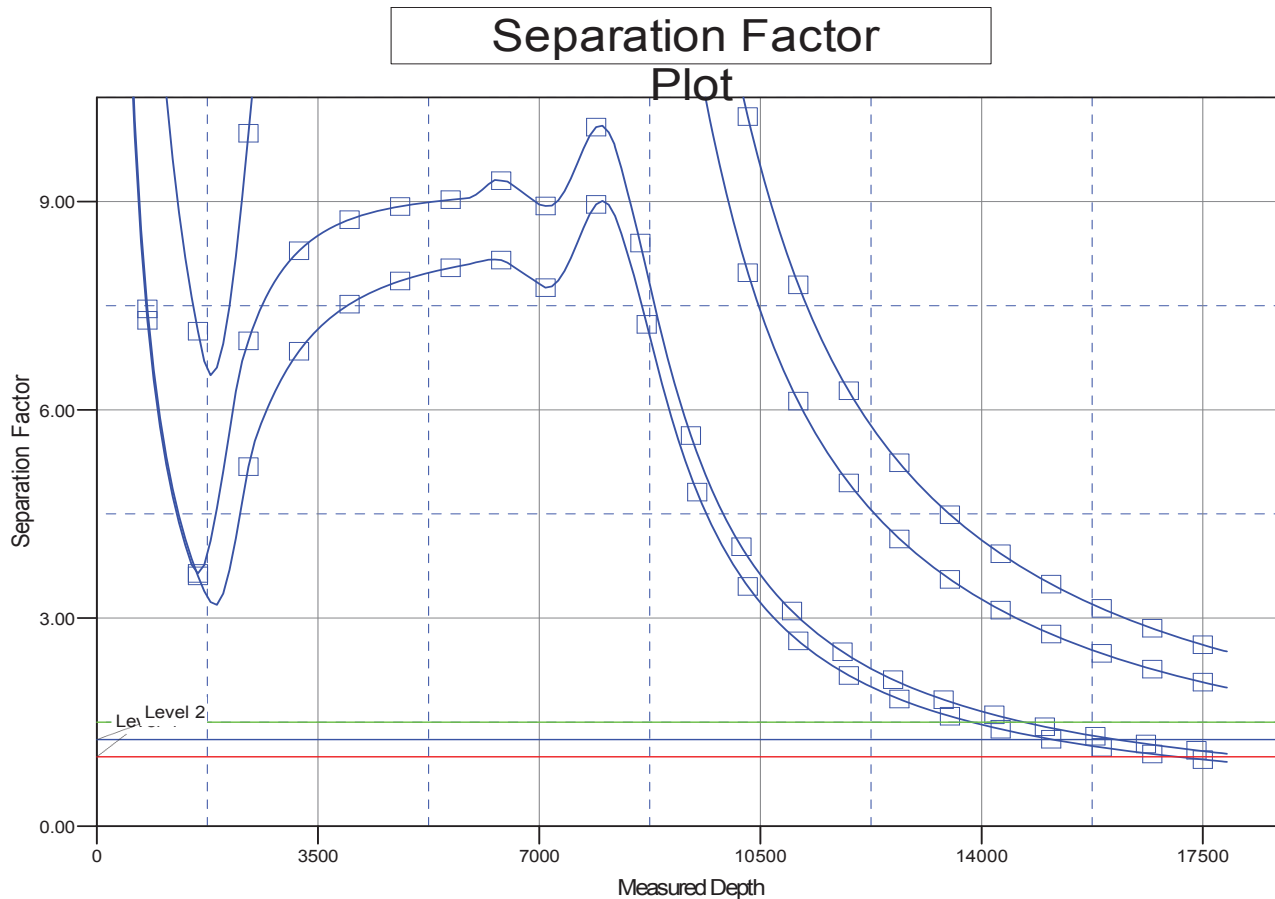
Grid Convergence at Surface is: 0.75°








Company:	Fifth Creek Energy Company, LLC	Local Co-ordinate Reference:	Well Randall Creek 503-2920H
Project:	Sec.29-T12N-R62W	TVD Reference:	WELL @ 5369.0ft (Original Well Elev)
Reference Site:	Randall Creek 29 SESE Pad Sec.29-T12N-R62W	MD Reference:	WELL @ 5369.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Randall Creek 503-2920H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (3-13-17)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5369.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Randall Creek 503-2920H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.75°



LEGEND

214-2920H, Wellbore #1, Plan #1 (3-13-17) V0		Randall Creek 504-2920H, Wellbore #1, Plan #1 (3-13-17) V0		Randall Creek 2-29H (Exist.), Wellbore #2,
215-2920H, Wellbore #1, Plan #1 (3-13-17) V0		Randall Creek 505-2920H, Wellbore #1, Plan #1 (3-13-17) V0		Randall Creek 4-32H (Exist.), Wellbore #1,
216-2920H, Wellbore #1, Plan #1 (3-13-17) V0		Randall Creek 2-29H (Exist.), Wellbore #1, Wellbore #1 V0		